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ORAL HYGIENE

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Perfection



CENTRIFUGAL CASTING MACHINE

**EASY TO
OPERATE**

FOR SMALL OR LARGE CASTINGS

A set of Akers' flasks and counterweight are the only additional accessories needed to allow dentures and other large castings to be made with the Perfection Casting Machine.

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Casting is the simplest step in the production of an inlay, or other cast restoration, when the simple, dependable Perfection Casting Machine is used to reproduce the wax pattern in metal.

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(C) The arm is released and the gold is thrown into the mold.

It is as simple as ABC!



THE CLEVELAND DENTAL MFG. CO.

Cleveland, Ohio, U. S. A.



When men first went down to the sea in ships on voyages of discovery they were hampered by the prevalence and devastation of scurvy. Step by step scientists—physicians, dentists, chemists—wrested from Nature the secret of vitamin C. The climactic culmination of this series of researches was the announcement by Roche of a successful method for: large-scale production, by synthetic means, of chemically pure vitamin C.

And now
ROCHE ANNOUNCES
CAL-C-MALT
 A NEW NUTRITIVE

THE ONLY
 SCIENTIFIC
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 PREPARATION
 THAT CONTAINS
 CHEMICALLY PURE

VITAMIN C

Two heaping teaspoonfuls contain:

—vitamin C (50 milligrams chemically pure cevitamic acid) equal to the vitamin C content of one large orange or $2\frac{1}{2}$ to 3 ounces of fresh orange juice,

—dibasic calcium phosphate, a readily assimilable form of calcium, $7\frac{1}{2}$ grains,

—together with effective amounts of vitamins B₁, B₂(C), cane and malt sugars, cocoa, and the non-fatty food elements of milk. Chemical analysis shows also the presence of iron, phosphorus, magnesium, and other valuable mineral salts.

Usual Dose: Two teaspoonfuls of Cal-C-Malt in a glass of milk (hot or cold) 2 or 3 times a day. *A delicious beverage.*



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A Master Craftsman



immediately recognizes the skilled workmanship and superior qualities embodied in an object of art. He instinctively senses the rhythm of the Masterpiece; the precision and patience of the artisan; and the delicate care that must be taken to preserve its original beauties for posterity.

Unfortunately, the layman is often lacking in this appreciation. Delicate porcelains and matchless wood grains are marred by stains and scratches that can only be removed or restored by an experienced hand.

In removing a stain from a delicate surface, the craftsman does not attack the area with sandpaper and implements that cut into the fibre. He does not use acids or abrasive materials that eat into the pores and weaken the structure. *He uses oils which,*

by their bland action, gently dissolve the stain thus preserving the life and characteristics of the surface.

In conformity with this sound principle of restorative technique Bost Tooth Paste was conceived.



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BOST TOOTH PASTE

removes organic stains and deposits from enamel surfaces by the bland *dissolving* activity of its emollient oils, thus eliminating the abrasive action of a scouring technic. The dissolving activity of Bost carries its potency to areas not accessible to the brush. It reaches pockets in protected areas that act as harbors for organic matter. Therefore benefits are not confined to exposed surfaces.

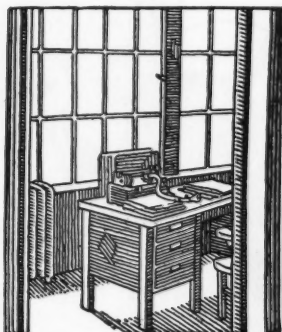
Bost contains no grit, acid or bleaching agent that might exert an unfavorable cumulative effect on the gum or enamel and prove harmful to child or adult.

Bost Tooth Paste makes no therapeutic claim whatever. It is designed solely to cleanse and bring back to the teeth the color and lustre that Nature endowed . . . and no more.

BOST TOOTH PASTE CORPORATION OF NEW YORK
Grand Central Palace **New York City**

The Publisher's CORNER

By MASS



■ Many of Hell's paving stones are deeply engraved with the name of this department. Too many, far too many, good intentions stay that way. It's nice to think about doing things you intend to do, or even promise to do. It gives you a sweet glow of righteousness that warms you like the summer sun, makes you feel a spot better than other men. Good intentions are cerebral cocktails. But the hangover is not so pleasant—when you happen to remember, as I am remembering this afternoon.

Pawing through the letters in the frowzy CORNER pouch—letters about the CORNER that I have been saving for years—brought to light evidence of more than one unkept promise, more than one unrealized good intention.

It was, for example, away back in the Fall of 1932 that Dr. Ben Milnes, of Buffalo, was promised a piece in ORAL HYGIENE about his then new book, *Hungry Hollow*. Ben is a CORNER-customer, or was then, anyway, and he sent an autographed copy of his novel which several of us here enjoyed enormously. *Hungry Hollow* is about the people in the backwoods community where Ben was born and where he spent his early years, among the Catskill Mountain folk.

"Each morning of my life, until I left home," he wrote me then, "I looked from my window down on garden and fruit trees, out over the Delaware River, up to the hills beyond—

Just out!



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Now you may use dental napkins from a dispensing box... a time-saving convenience at no added cost. The same high-grade, soft, absorbent J & J gauze you've always had is used for Nufold Dental Napkins. They have new, neat, ravel-free edges, in a compact box which fits your cabinet drawer. Napkins are folded in series so that one is withdrawn at a time. Standard No. 2 Quality, size 6" x 6", sterilized after packaging, box of 100 for **55c**

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tree covered hills which hold back in their fastnesses the farms and homes of the descendants of the earliest settlers.

"Each year, sometimes two or three times, I went with my parents back into those hills, to the farms and the little settlements of hill-born men and women. When I was older, I went with fish pole, gun or camera . . . to spend days where neighbors are friends . . ."

Ben was pretty young when he started to write, because he couldn't help writing, and the urge has persisted all through his professional life, leading, among other things, to the editorship of *The Reflector* at the University of Buffalo Dental College when he was a student there.

For many years he has been practicing dentistry by day and writing at night. "Most of all, the desire to put the people of the Catskill Mountains into story has been a part of my plans," he wrote me. "Three years ago I began in earnest. Each year I have spent some time back in those hills . . . Hill folk, picturesque, glorious in their unflinching though often misguided standards, are a race of people by themselves . . . You see, I know them—even the secrets of their hearts—for I am of them—and *Hungry Hollow* just came off the pencil tip . . ."

I hope that *Hungry Hollow* may still be available in bookstores or libraries, so that other CORNER folks may have an opportunity to discover, as I did, that a member of our little dental world is capable of writing an entertaining and absorbing novel, so good as to find a publisher—which is no small feat in itself, I understand.

So then, here's the piece I volunteered to write about you and your book, Ben; I hope I may be forgiven for being so slow.

The extreme southern boundary of the department has been reached—with only one ancient promise kept, only one ancient good intention carried out. Down in Hell, some conscientious fiend is perhaps even now chiseling off some engraving. The stone will be blank only for a little while.

After two years of special research and experiment, Dr. Kelly's Impression Paste in ready-mixed form has been perfected, and is now made available to the profession through dental dealers. Advantages:

1. Quick spatulation—already in paste form.
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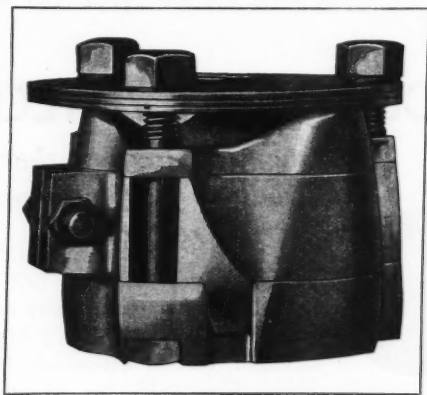
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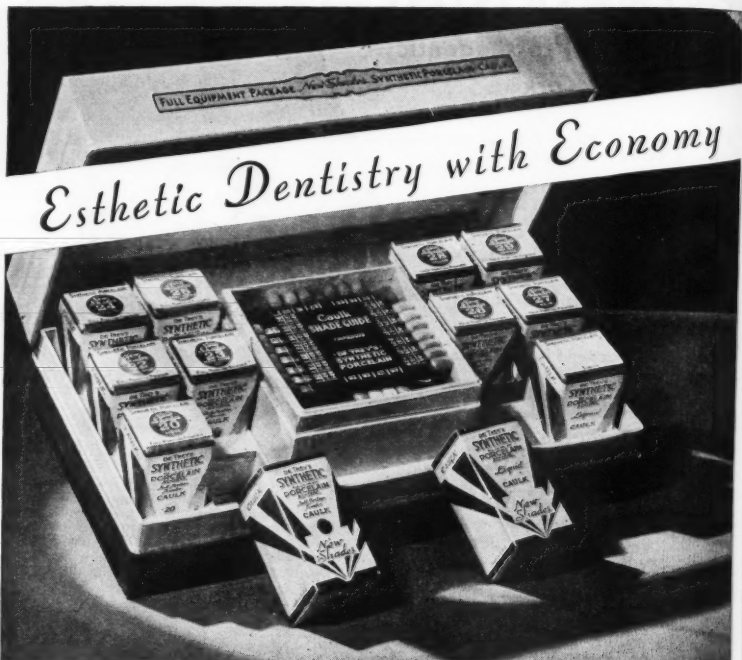
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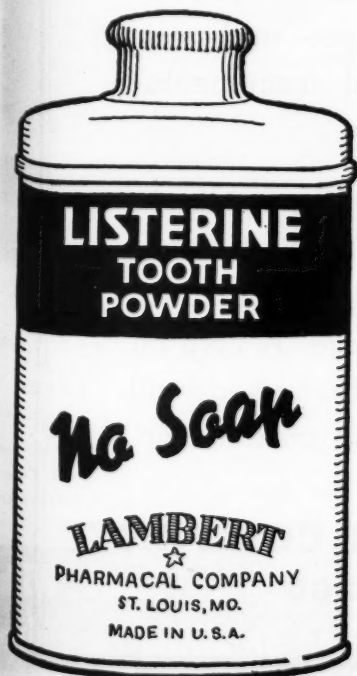
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SIDE VIEW
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MODEL

CANNED FOODS AND THE PUBLIC HEALTH

II. Iron and Tin Salts

● The question is sometimes raised as to whether the metallic salts which canned foods may acquire from contact with tin containers are objectionable from the standpoint of public health. We are glad to present the facts in answer to this question.

The modern "sanitary style" can is manufactured from "tin plate". As the name implies, tin plate is made by plating or coating thin steel sheets with pure tin. This tin coating cannot be made absolutely continuous; under the microscope, minute areas can be noted in which the steel base is exposed.

Foods packed in plain or unenameled cans are, therefore, exposed to iron and tin surfaces. In enameled cans, foods are mainly in contact with inert lacquers baked onto the tin plate at high temperatures. However, because of minute abrasions in the enamel covering, unavoidably introduced during fabrication of the can, foods in enameled cans may also have limited contacts with iron and tin surfaces.

It is common knowledge that canned foods may acquire small amounts of these metals from contact with their containers. The acquisition of iron and tin salts in this manner is an electrochemical phenomenon (1); and the amounts of these metallic salts thus acquired will depend, among other factors, upon the character of the food. In general, the acid foods tend to take up

more of these metals; especially when air is admitted after the can is opened. However, the quantities of tin or iron present in canned foods, as a result of reaction with the container, are small; the analytical chemist reports these amounts in "parts per million".

As far as iron is concerned, it is commonly accepted that the amounts of this element—recognized as essential in human nutrition—which may be present in canned foods, are innocuous.

As to the tin salts which may be present in canned foods, the Department of Agriculture has authorized the following statement as the result of its own investigation:

"Our own experimental work, involving the ingestion of far larger amounts of tin than any previously reported, and supported by the experimental evidence of other investigators, leads us to the conclusion that tin, in the amounts ordinarily found in canned foods and in the quantity which would be ingested in the ordinary individual diet, is for all practical purposes, eliminated and is not productive of harmful effects to the consumer of canned foods." (2)

It may therefore be stated that the amounts of tin and iron salts normally present in commercially canned foods are without significance as far as possible hazard to consumer health is concerned.

AMERICAN CAN COMPANY

230 Park Avenue, New York City

(1) Kohman and Sanborn, *Ind. Eng. Chem.* 20, 76, 1373 (1928); *ibid.*, 22, 616 (1930).

(2) "Food-Borne Infections and Intoxications," F.W. Tanner, *Twin City Pub. Co., Champaign, Ill.* 1935, p. 90.

This is the tenth in a series of monthly articles, which will summarize, for your convenience, the conclusions about canned foods which authorities in nutritional research have reached. What phases of canned foods knowledge are of greatest interest to you? Your suggestions will determine the subject matter of future articles. Address a post card to the American Can Company, New York, N. Y.

An office floor that says "hygienic"



THE dentist knows the value of a highly sanitary, modern and distinctive office that speaks his own language. Sealex Veltone Linoleum is one sure way of producing this effect.

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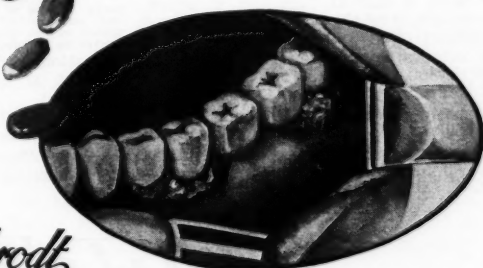
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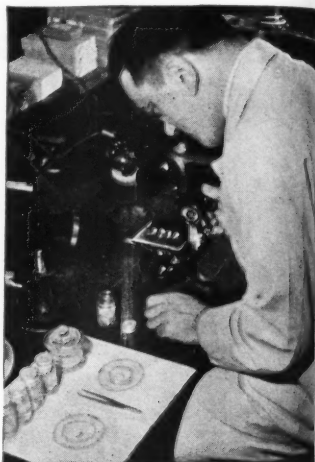
For greater ease of administration—and assurance that the patient will maintain the prescribed routine—White Laboratories present the natural vitamins A and D of time-proved cod liver oil in modern dosage forms to suit the needs of every patient. There is no fortification by materials from other sources. Furthermore, White's Concentrate retains the particular ratio between the two vitamins characteristic of this world-recognized therapeutic agent, as defined in the U.S.P.XI.

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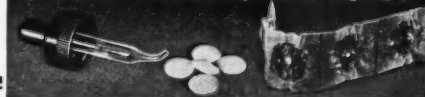
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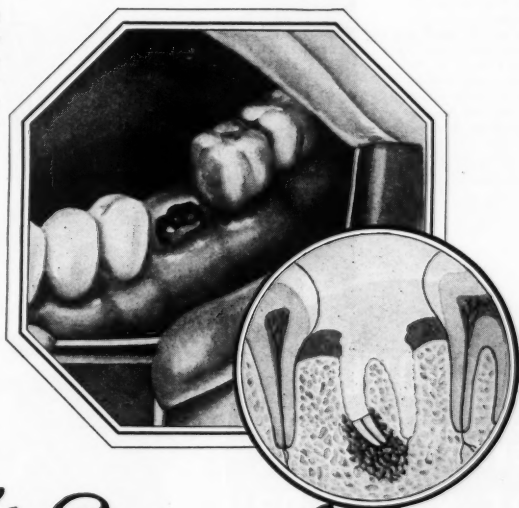
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By successfully eliminating body wastes through gentle laxation, Sal Hepatica checks systemic involvement.

Sal Hepatica counteracts acidity. By protecting the alkaline reserve at the proper balance, it strengthens resistance against infection and possible "reaction" from dental work.

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AUTHORITIES seem to agree generally that all patients who present themselves in a dental office should have a complete x-ray examination, to reveal incipient disease and provide a more comprehensive basis for future treatments.

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A CELEBRATED DENTURE

By FRANK A. DUNN, D.D.S.

■ The artificial teeth of Doctor George Parkman spoke louder than a thousand tongues. They told a scalp-tingling tale of horror. Upon them hinged the solution of an amazing murder, the identity of the victim, and the guilt of the perpetrator.

\$3,000 REWARD

"Doctor George Parkman, a well-known citizen of Boston, left his residence, Number 8 Walnut Street, on Friday last. He is 60 years of age, 5 feet, 9 inches high; grey hair, thin face, with a scar under the chin; light complexion, and usually walks rapidly. He was dressed in a dark frock coat, dark pantaloons, purple silk vest, with dark figured black stock, and black hat.

"As he may have wandered from home in consequence of some sudden aberration of mind, being perfectly well when he left his home; or, as he had with him a large sum of money, he may have been foully dealt with. The above reward will be paid for information which will lead to his discovery, if alive; or for the detection and conviction of the perpetrators, if any injury may have been done to him. Information may be given to the City Marshall. Boston, November 26, 1849."

The prominence in social and scientific circles of those involved gave the case world-wide publicity. Doctor George Parkman's munificence had erected the medical school building of Harvard University. He was the uncle of Francis Parkman, prince of historians.

Doctor Oliver Wendell Holmes was one of the court witnesses. He was Parkman Professor of Anatomy and Physiology in the medical school, a friend of Doctor Parkman, and a colleague of the murderer.

Doctor William T. G. Morton, dentist, was another witness. Three years previously he had brought to mankind one of its greatest blessings, the use of ether as an anesthetic.

Dickens found unusual interest in the case. Many years after the crime he said in a letter to Lord Lytton, quoted in his biography, "Just before Christmas of 1867, being in Cambridge on my second American tour, I went over to the Medical School in order to see the exact localities

\$3000 REWARD

DOCTOR *George Parkman*, a well known citizen of *Boston* left his residence, **NUMBER 8 WALNUT STREET**, on *Friday*. He is **60 YEARS** of age **5 FEET, 9 INCHES** high; grey hair, a scar under the eye, and usual dress.

where that amazing murder of Doctor Parkman took place and the murderer worked so hard to rid himself of the body."

Doctor John W. Webster, Professor of Chemistry and Mineralogy in the medical school, was one of the chief figures in the case. An outstanding member of various scientific societies and a distinguished writer of technical literature, he was among the foremost men of the time in his field. He had an excellent social position for a college professor.

DOCTOR PARKMAN MISSING

When Doctor George Parkman did not come home to dinner the evening of Friday, November 23, 1849, his family became uneasy. Whenever business would detain him from reaching home at his usual time for meals, he would be scrupulously careful to notify his family. As the night passed into morning without his appearance, uneasiness turned to alarm.

But nothing was done save

to make casual inquiries, because several persons reported having seen Doctor Parkman. These reports were proved later to have no foundation. The police were then notified and the case of the missing doctor given wide publicity. Advertisements in the newspapers and in the form of handbills were issued offering liberal rewards. That part of the city in which Doctor Parkman had considerable property was carefully searched; the yards, outbuildings, and dwelling houses were gone over by the police; the river was dragged—all with no result.

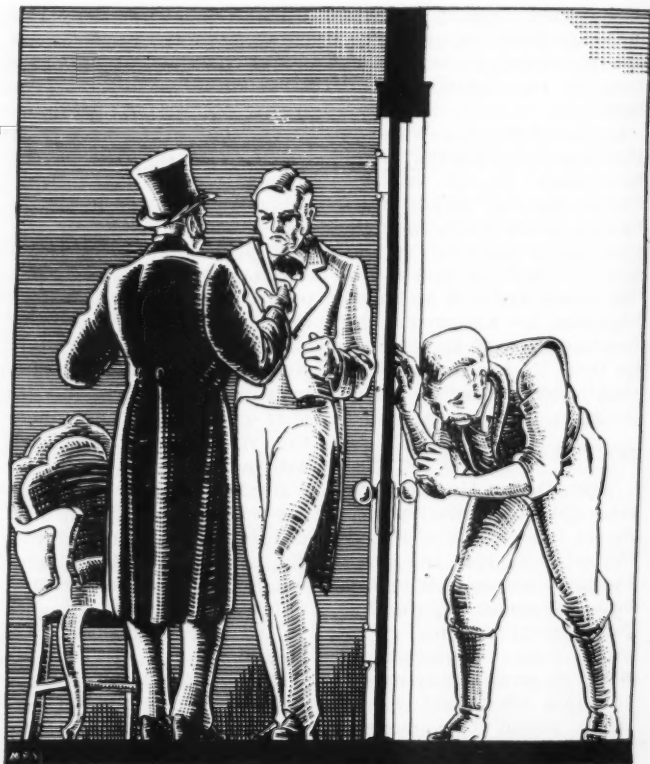
He had been seen last in the vicinity of the medical college. The police began a check-up of the college building, but it was merely routine, as no suspicion was attached to anyone connected with the college.

Doctor John W. Webster had been a classmate of Doctor Parkman's and a close friend of his for many years, but their relations had become strained. He had bor-

rowed several hundred dollars from Doctor Parkman at different times and never had made complete settlement. For security he had given a mortgage on his personal property and had urged that the transaction be kept secret. From his point of view there were good reasons for secrecy. He had also borrowed

several hundred dollars from Robert Shaw, brother-in-law of Doctor Parkman, and had given him a mortgage on the same property.

Later Shaw spoke sympathetically to his brother-in-law about Doctor Webster's financial troubles, casually saying that he had lent him several hundred dollars, and



"The janitor of the college had heard sharp words pass. . ."

for security had taken a mortgage on his personal property. Doctor Parkman angrily asserted that Webster was a dishonest man and that he himself held a mortgage on his personal property. He then sought out Doctor Webster and insisted upon settlement, threatening to expose him if the borrowed money was not paid immediately.

The third day after Doctor Parkman's disappearance, Doctor Webster called on the missing man's brother and told him that he had seen Doctor Parkman on Friday afternoon, the day he had disappeared, and that he had paid him \$480. Asked why he had not reported sooner that he had been one of the last men to see Doctor Parkman, he said he did not know until the night before that Doctor Parkman was missing.

QUARREL OVERHEARD

The janitor of the college had heard sharp words pass between Doctor Parkman and Doctor Webster a few days before the former was reported missing. He suspected from the start that Doctor Webster had done away with him, and from that moment he kept an alert eye and ear toward him. He spent hours with an eye or ear to keyholes trying to learn what was happening on the other side. The doctor himself had a keyhole psychosis—it was found later

that he had made skeleton keys to fit all the doors of the medical college building.

Possibly when the janitor saw the notice of \$3000 reward he was stirred to greater activity. He went poking and nosing round, finding things that increased his suspicions. He notified the police.

The police made a thorough search of Doctor Webster's quarters. Some parts of a human body were found in a tea chest, but no part could help in identifying the person to whom it had belonged. Some bones were found in the furnace of the chemical laboratory. They were much broken and some were partly fused into the cinders. Among the bones were fragments of a human skull and *three blocks of mineral teeth*. This discovery was made one week after Doctor Parkman's disappearance.

Doctor Webster was arrested for murder. The following is one of the counts under which he was indicted: "That on November 23, 1849, John W. Webster did feloniously, willfully, and of his malice aforethought strike, beat, and kick George Parkman upon the head, breast, back, belly, sides, and other parts of the body, and then did cast the said George Parkman down upon the floor with great force and violence, inflicting mortal wounds and bruises."

Referring to the bones and parts of a human body found

in the college laboratory, Doctor Webster said, "That is no more Doctor Parkman's body than it is mine; and how in the name of heaven it came there I do not know."

The trial was a sensation that upset not only staid Boston, but the whole United States, and reverberated during many later years. While important parts as witnesses were played by nationally prominent members of the medical and legal professions, the premier part as a witness was played by a member of the dental profession, Doctor Nathan C. Keep.

Extracts from the opening speech¹ of the prosecution: "Gentlemen, you will have placed for your inspection a block of mineral teeth found in the chemical laboratory furnace. Doctor Keep, an accomplished dentist, will testify that they are the teeth of Doctor Parkman, made for him in 1846, upon an occasion which Doctor Keep distinctly recollects, recognizing his own work, and beyond that giving you the grounds upon which he feels the confidence that he will express in his testimony; a confidence so strong, from his recollection of the work itself, and the formation of those teeth, the peculiarities of their formation, and other facts, that if he had seen them in Africa, or be-

yond the sea, he should have known them to be the teeth he made for Doctor Parkman. It will be shown that Doctor Keep has in his possession, and can produce now, a mould of the entire jaw of Doctor Parkman, taken at the time he made the block of mineral teeth. You will see by that mould, which will be testified to by Doctor Keep, that it is a mould which showed the peculiar conformation of Doctor Parkman's jaw—a peculiarity so great, that you could not find, through any caprice of nature, another precisely like it.

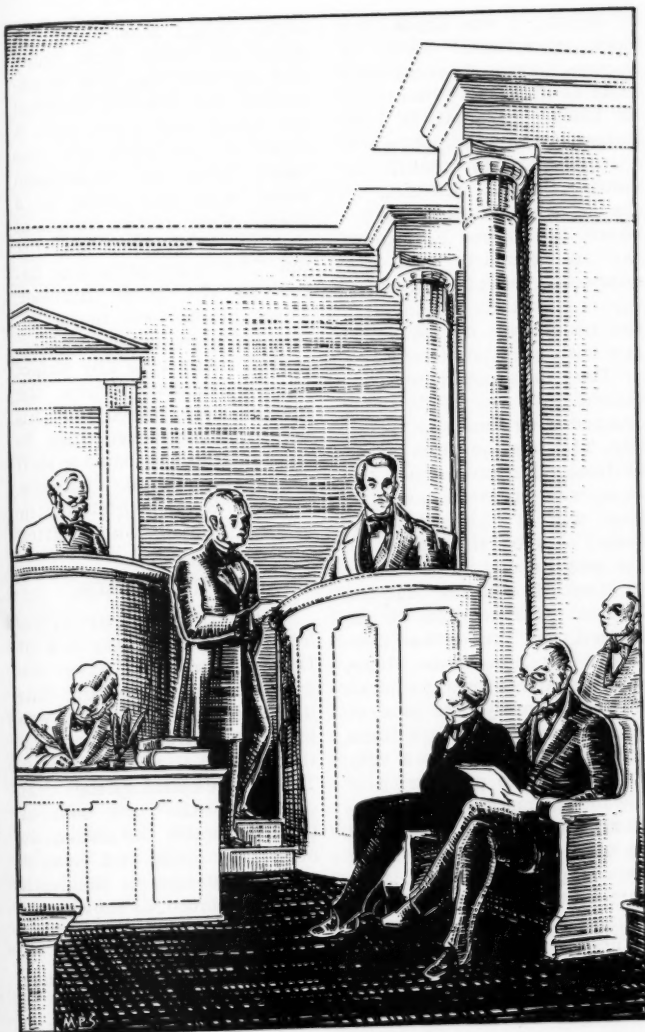
"It will appear from the evidence that these mineral teeth must have been cast into that furnace in connection with the head. That will be made perfectly clear and apparent to you."

FOR THE DEFENSE

From the opening speech¹ of the defense: "Take another department of their case. They say they prove the identity of the body. How do they prove it? Principally by the teeth found in the furnace, by marks upon the teeth! Suppose it should turn out that there is no very great peculiarity; there is an end to their identity."

From the testimony of Doctor Nathan C. Keep: "I have been in the practice of dentistry for thirty years. As early as 1825, Doctor Parkman employed me as his fam-

¹Famous Trial Series, Trial of Professor John White Webster, edited by George Dillnot, Charles Scribner Sons.



Doctor Oliver Wendell Holmes was one of the court witnesses.

ily dentist. I was shown the block of mineral teeth by Doctor Lewis. I recognized them as the teeth I had made for Doctor Parkman in 1846. Doctor Parkman's mouth was a very peculiar mouth, in many respects, differing in the relation that existed between the upper and lower jaw so peculiarly, that the impression left upon my mind was very distinct. I remember the peculiarity of the lower jaw with great exactness.

"The circumstances connected with the teeth being ordered were somewhat peculiar. The first question asked by Doctor Parkman when the teeth were ordered, was, 'How long will it take to make them?' I took the liberty to ask why he was so particular to know. He told me that the Medical College was to be opened, and that it was necessary for him to be there, and perhaps to speak; and he wanted them by that time, or else he would not want them at all. That time was a very short one; the peculiarity of the mouth made it a case requiring as much skill as could be used. I began to do it as soon as possible; gave a large part of my attention to it. In consequence of these circumstances, I remember very distinctly what was done more than in ordinary cases. I proceeded in my usual mode to take the impression. The first step was to take an exact facsimile of each jaw with wax,

metal, liquid plaster, etc. A plate was made from that; and the next step was to ascertain the relation between the upper and lower jaw. A model of the lower jaw was made from an impression taken with wax while in a plastic state, and by means of this the lower plate was fitted. The upper plate was fitted in the same manner. These plates were made before the gold plates to ascertain if there were any defect in the models. When the plates were fitted to his mouth, I requested him to close it until I satisfied myself as to the suitable distance. (Doctor Keep exhibited the original plates, which fitted to the models.)

SPIRAL SPRINGS USED

"A great irregularity on the left side of the lower jaw of Doctor Parkman gave me great trouble in setting this up. Each set of teeth was made in three blocks, and then joined to the gold plate. There were spiral springs that connected the two sets of teeth to enable the patient to open his mouth and close it with less danger of the teeth being displaced, as they would have been without the springs. Doctor Parkman said that he did not feel that he had room for his tongue. In order to obviate that difficulty I ground the block of the lower jaw on the inside to make it lighter and furnish more

room for the tongue. The beauty of it was defaced by the grinding. The shape left by the grinding was very peculiar.

"I saw Doctor Parkman about two weeks previous to his disappearance. He told me his trouble. I took his teeth, both upper and lower, examined them, and put on a new spring. After the disappearance of Doctor Parkman, I was handed these remains of mineral teeth. I recognized them to be the teeth I had made for Doctor Parkman. The most of the portion that remained was the block belonging to the left side of the lower jaw. Several other parts had been very much injured by fire. I proceeded to look for the mould upon which these teeth were made, put the metal upon its proper place, and it fitted exactly. There is sufficient left of these blocks to identify the place where they belonged. There is no mistake. All the pieces having been found, there were five pieces, which fitted to their exact places. The only piece that could not be identified might or might not have been right; but it was supposed to be right, as there was no reason that it should not be so.

"I saw the teeth in the doctor's head the last time I saw him. The presumption is very strong that these teeth were put in the fire in the head. Such is the nature of these

mineral teeth that, especially if they have been worn, they absorb small particles of water; when suddenly heated, the surface becomes closed and the water becomes steam, and there would be a report, with an explosion. If, while in the head, they were put into the fire, only a small portion would be exposed to the heat; and as the temperature would be raised so gradually, the water would have time to escape; and this accounts in my mind for the teeth not being cracked, excepting the front teeth, which would have been most exposed. I have found fused into the remains of teeth portions of natural jaw."

From the testimony of Doctor Daniel Harwood: "I am a dentist. I am a member of the Massachusetts Medical Society. I was one of the first to manufacture mineral teeth extensively, though perhaps not the first. There are characteristics generally about teeth by which a dentist would be as likely to know his own works as a sculptor would be to recognize his own statues, or a merchant his own writing. I mean to say this is generally so."

DOCTOR MORTON ON STAND

Doctor William T. G. Morton gave evidence that there was no mark nor abnormal peculiarity by which the teeth found in the furnace could be identified as Doctor Park-

man's.

From the testimony of Doctor Oliver Wendell Holmes: "I am Parkman Professor of Anatomy and Physiology in the Medical School. The professorship is named after Doctor George Parkman. The dedication of the Medical School must have been on the first Wednesday of November. I noticed Doctor Parkman's teeth, on that occasion, as new; they were white and long." (Doctor Holmes testified chiefly about parts of anatomy other than the head.)

From the closing speech for the defense: "If you are satisfied that this is the body of Doctor Parkman, that settles the point. If you are not satisfied, their case is gone."

From the closing speech of the prosecution: "I come now to the positive, the demonstrative testimony; upon which I undertake to say that you as intelligent men must be as well convinced as if we had brought in here the entire mortal body of the deceased. I mean the testimony of Doctors Keep, Noble (his assistant), and Wyman. I consider, too, that these witnesses were not volunteers to fasten onto this unfortunate person a charge so awful and revolting as this. No! Doctor Keep's own emotion indicated with what reluctance he had come to that awful conviction. Why, gentlemen, why? Not simply that these were the remains of his friend, but

that they were also the remains of the friend of Doctor Webster, who was also his friend. He was his teacher.

"If anything more is needed it is found in the conformity of the jaw of Doctor Parkman to the mould which Doctor Keep had, which mould corresponded with all the peculiarities of the jaw of Doctor Parkman, picked from the smoldering ashes. The evidence of identity could not be more conclusive."

From the Judge's remarks to Doctor Webster: "Before committing this case to the jury, if you have anything to say you may address the jury, making any statement that you think fit, and which you think necessary for your defense."

From statement of Doctor Webster: "My very calmness has been brought against me. My trust has been in my God. I have been advised by my counsel to remain as calm as possible." (He made numerous explanations to show that he had not committed the crime.)

From the Judge's charge to the jury: "It has sometimes been said by judges that a jury never ought to convict in a capital case unless the dead body is found. That, as a general proposition, is true. It sometimes happens, however, that it cannot be found where the proof of death is clear.

"You are to determine by all the testimony, whether those

were the teeth of Doctor Parkman, and belonged to the same body as the other parts; and, if so, it has a strong tendency to a proof of death by violence; otherwise, not. If this is not proved to the satisfaction of the jury, beyond reasonable doubt, then the dead body is not proved to be that of Doctor Parkman, and the proof of the corpus delicti, as offered by the prosecution, fails."

The jury retired for three hours and then returned with a verdict of guilty. Two days later sentence was pronounced—that he be hanged by the neck until dead.

The case was about to be appealed when Doctor Webster made a confession, in which he tried to lessen his

culpability for the crime. But the facts were plain: He had lured his former friend and benefactor, who had even secured him his professorship, to the medical school building, by promising to settle his indebtedness. He struck him down with a club. A puncture over the left breast indicated that he may have stabbed Doctor Parkman to the heart with a knife, after which Doctor Webster dismembered the body. What might have been identifiable portions of the body he disposed of immediately by burning in the furnace; other portions he put aside until a more convenient time. He paid for his crime on the gal-
lows.

9107 Wade Park Avenue
Cleveland, Ohio

DEAN SECCOMBE DIES SUDDENLY

Doctor Wallace Seccombe's sudden death in Toronto on January sixteenth was genuinely regretted by members of the dental profession throughout Canada and the United States. As Dean of the faculty of dentistry of the University of Toronto, he was well known for his efforts to advance dental education. Besides being associated with the college of dentistry for thirty years, he founded a chair for preventive dentistry at the University and was the editor of the *Oral Health Dental Magazine*. He also gained wide recognition for his work as chairman of the Canadian survey on dental education.

RADIODONTIC PUZZLE PICTURES

An Informal Presentation of the Subject of Interpretation

By HOWARD R. RAPER, D.D.S.

THE PIN AND THE PULP

■ Many dental crimes, not to mention a few misdemeanors, have been detected by radiographs.

Here we see, in Fig. 1-C2, what seems to be a wanton and brutal attack on an innocent pulp. The radiograph shows an inlay retention-pin poked into the canal of a lower cuspid. But things are not always what they seem either in life or in radiographs, and a good radiodontic detective should be able to differentiate between what is and what only seems to be.

And, by the way, I often wonder how crime detectives, who use the lie detectors I read about in the papers, differentiate between the high blood pressure brought on by lying and that generated by some other emotional stress. Suppose the questioner got mad because his questioners would not believe him, even when he told them the truth.

Or suppose he happened to think about Mae West. What would the machine do in a case like that?

But until lie detectors are equipped with radiodontic attachments, we need not concern ourselves particularly with them in this department. The question before us is, do you believe what you see in Fig. 1-C2? If not, why not? If the pin is not in the canal, where is it and why does it appear to be in the canal?

The answer can be worked out with paper and pencil by making a sketch of a cross section of the teeth and considering possible variations in the horizontal x-ray angle. This will be done in the next issue of ORAL HYGIENE and the soundness of the solution checked radiographically. Meantime, why not work it out for yourself, and then see later how near your own solution checks with the printed



Fig. 1-C1

one? Better save this issue of the magazine; you may want to refer to it when next month's solution is printed.

THE ANSWER TO LAST MONTH'S CASE

Although there was no operation for its removal, a supernumerary tooth body disappeared from the apical region of an upper central incisor in a child's mouth.

Now imbedded supernumerary teeth or odontomata do not fall out, or disappear into thin air, or resorb completely

in two years leaving no trace of their presence. So my first conclusion was that it was *not* a supernumerary tooth body.

If not an odontoma or supernumerary tooth, then the body had to be something else. Very well, what else? It had to be something that looked like a small tooth or odontoma.

A seed of some sort? No, a seed would not be so radiopaque.

What is something like a seed, but more opaque to the x-rays?

A glass bead? Yes, but how could a bead get into the bone in the apical region of an upper central incisor?

Well, it would not be necessary for the object to be in the bone in order to appear to be in it in a radiograph. A bead stuck in the nose could have the radiographic appearance of being in the bone.

If the reader will refer to last month's ORAL HYGIENE and look again at the body, he will see, perhaps to his mild surprise, that the body looks like a bead. The hole for stringing it is seen.

That's my diagnosis then. The child had put a bead in her nose. It was there when the first radiographs were made. It had been blown out or expelled through the pharynx before the second ones were made.

The Psychologic Factor in DENTAL CARIES

By E. F. BRIGGS, D.D.S.

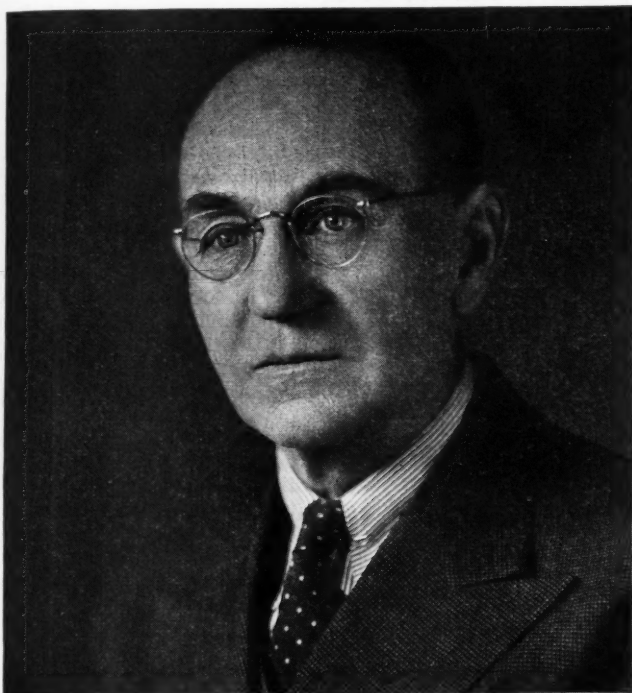
■ Of all maladies with which humanity has been afflicted since the dawn of civilization, dental caries has probably been one that more than any other has baffled science in the search for its cause and has also been one that has been more universal in its scope. Evidence that it is an affliction of civilized peoples is seen in a study of skulls from the earliest civilization to the present time. We note its absence only among those who enjoy a tranquil existence or have not experienced the complexities of civilization. Like all diseases that have come to us in the past, its cause has always been explained according to the theories of medical science that prevailed at that time.

Following Lister's introduction of aseptic surgery came the chemico-parasitic theory which has never been disproved, but a satisfactory explanation of the manner in which it is brought about has yet to be given. We have tried to find an explanation through heredity. An abundance of information as regards tooth cleanliness has been given us, and volumes have been written on the relation of diet and vitamins to tooth decay. While all these are unquestionably valuable adjuncts in its control, there is a predisposing cause that yet remains unexplained.

From time immemorial physicians, consciously or unconsciously, have utilized the minds of their patients, di-

rectly or indirectly, to combat disease, and more recently the attitude taken by a large part of the medical and dental professions in regard to the influence of the mind over bodily function has changed considerably.

"The natural processes of the alimentary canal are fundamental to all other functions of the body . . . The secretion of saliva, gastric juice, pancreatic juice and bile is stopped, and the motions of the stomach and intestines cease at once, both in man and in the lower animals whenever pain, fear, rage, or other strong excitement is present in the organism."¹ Some years ago, in a series of experiments conducted at Cornell University, it was dis-



E. F. BRIGGS, D.D.S.

covered that in the emotions of anger, the saliva gave a positively poisonous reaction. Since the emotion of anger can produce such a reaction in the saliva, it would seem probable that there is some emotion that alters it sufficiently to cause caries.

"There is much evidence," according to Page, "that a lack of minerals is the chief cause of dental caries. Actually there is no lack of min-

erals in the average well-balanced diet. It is a lack of our ability to assimilate them." Doctor Herman H. Rubin says: "Today, we know the chemical control of the body is affected by the endocrine glands."

In discussing the relation of the glands to tooth structure R. A. Reynolds, M.D., writes: "We have already much evidence to indicate that the function of the parathyroids

"In the use of the term 'emotion' the meaning is not restricted to violent affective states, but includes 'feelings' and other affective experiences. At times, also, in order to avoid awkward expressions, the term is used in the popular manner, as if the 'feeling' caused the bodily change."¹

is the maintenance of diffusible calcium content of the blood plasma at a definite level, and the control of the calcium balance of the body. Since approximately 85 per cent of all bone structure is made up of calcium, it is evident that a close relationship must exist between tooth metabolism and the endocrine system . . . A condition of extreme hypothyroidism (cretinism) in childhood will prevent normal deposition of calcium in the bones and cause delayed dentition."

Other evidence of close relationship between the endocrine system and calcium metabolism has been accumulated by Marcus Brucker:

"Erdheim as early as nineteen hundred eleven reported that the removal of the parathyroids in a rat produces faulty dentition, delays calcification of the callus, and impoverishes the body of lime salts.

"In nineteen hundred twenty Greenwald and Gross dem-

onstrated conclusively that a parathyroidectomy resulted in a decreased excretion of calcium.

"When the thyroid is underactive and when this underactivity occurs during childhood, dwarfism or cretinism may result. The bones are small and short, and the teeth are poorly developed."

A remarkable cooperation exists between many of the endocrine glands, especially the thyroid and gonads. The thyroid is called upon to perform extra service during puberty, pregnancy, and menopause, periods during which dental caries is often active. It has been observed that any interference with the normal sex life of an individual is accompanied by caries.

CASE REPORTS

Many cases are reported that most unmistakably show the correlation between emotions, calcium metabolism, and the thyroid gland. None illustrate this better than those recorded by Cannon.

Case 1. A man twenty years of age had a quarrel with his

"An escape from the insistent demands of the pathologist for structural evidence of disease, and also from the vagueness and mysticism of the psychological healers, can be found in an understanding of the physiological processes, which accompany deep emotional disturbances."¹

¹Cannon, W. B.: *Bodily Changes In Pain, Fear, Hunger, and Rage*, Ed. 2, New York and London, D. Appleton and Co., 1929.

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fiancée. She, pretending to commit suicide, had in his presence swallowed some pills and fallen down screaming. The man departed hastily. Within a week he was suffering from a swelling of the neck and nervousness. When he appeared at the hospital four months later he had lost weight, he presented a large goiter . . . and his basal metabolism was up 24 per cent above the normal level.

Case 2. A married woman witnessed her husband kill his two brothers. The husband bitterly reproached her for not coming to his defense at the trial. Only a week later a goiter became evident and reached a large size in a period of seven days.

"Cabot has recorded an instance of the fracture of a leg which failed to unite. Investigation showed that the patient was fearful lest his family was suffering while he was absent at the hospital . . . Assurance that his family was well and happy and being cared for quickly altered the patient's condition; he ceased worrying, thereupon began to eat heartily and gain in nutrition, and then his broken bones began to knit."²

These are exceedingly extreme cases of emotional disturbance, but it can be readily understood how a disturbance of a milder nature, extending over a period of time,

"The assumption that emotional agencies are causing mischief in the organism should be a last resort—an explanation which is offered only after every effort has been made to find another explanation. And even when the cause is ascribed to fear or rage or some other strong feeling, proof for that conclusion should be carefully sought both at the source of the trouble and in the effect of appropriate treatment. Nor should the possibility be overlooked that along with profound emotional disturbance there will be discovered an organic lesion. The two conditions, the altered structure of some organ and the altered function of the nervous system, may be causally related, and may have to be treated as a single disorder. Certain it is that only when they are both regarded as the perturbations of a single unity, the organism, will they be properly conceived and effectively treated."³

can alter the balance of the calcium metabolism.

Every dentist has observed that where there is a marked deposit of salivary calculus, there is less caries. This would lead us to an assumption that a high salivary calcium is essential to immunity, and that when the calcium content of the saliva drops to a point where it fails to neutralize or the acid in the saliva predominates, caries appears.

Soon after learning the results of the experiments con-

²Cabot: Harvard Alumni Bulletin 27:384, 1925.

"The conditions favorable to proper digestion are wholly abolished when unpleasant feelings such as vexation and worry and anxiety, or great emotions, such as anger and fear, are allowed to prevail. This fact, so far as the salivary secretion is concerned, has long been known. The dry mouth of the anxious person called upon to speak in public is a common instance; and the 'ordeal of rice,' as employed in India, was a practical utilization of the knowledge that excitement is capable of inhibiting the salivary flow. When several persons were suspected of crime, the consecrated rice was given to them all to chew, and after a short time it was spit out upon the leaf of the sacred fig tree. If any one ejected it dry, that was taken as proof that fear of being discovered had stopped the secretion and consequently he was adjudged guilty."³

³Lea: Superstition and Force, Philadelphia, page 344, 1892.

ducted at Cornell, I began checking all cases in which caries had been dormant and in which I observed a recurrence of caries around restorations or cases in which caries was active generally, to determine what event had come into the lives of the patients that had been hard to bear, and the following are typical of my observations:

Case 1. Male, single; age, thirty-eight; profession, teacher in high school; always

resided with parents; reported recent death of mother.

Case 2: A woman; age, thirty; single and living with parents, reported that her mother had fallen about a year ago and received an injury from which she could not recover.

Case 3. Brother and sister, ages sixty-one and fifty-eight. Brother, a lawyer and unmarried; both had been living with an invalid mother; reported her recent death.

Case 4. Male, single, age, thirty-six; occupation, merchant; reported death of mother with whom he had always lived.

Case 5. Woman, age, fifty-four; married, no children; general health always good; reported loss of nearly all of their money and property.

Lack of harmony in a family between parents or between children themselves seems to be another noticeable factor in the cause of caries in the teeth of children.

Of a boy, eight, his mother reported: "Buddy has recently developed an irritable disposition." On further questioning, I learned he had a brother four years younger

"The general statement that pain evokes the same changes that are evoked by emotion, is true also of these deep-lying structures."¹

Adrenal secretion in pain and great emotional states produces:

1. Increase in amount of blood sugar

2. Helps to distribute blood to heart, lungs, central nervous system, limbs, and away from the abdominal viscera

3. Abolishes effects of muscular fatigue

4. Produces a contraction of the small blood vessels, thus accelerating the heart rate and increasing the arterial blood pressure

5. Accelerates the coagulation time of the blood

"All these changes are directly serviceable in making the organisms more effective in the violent display of energy which fear or rage or pain may involve."

who was a great annoyance to him. Such cases could be multiplied, but would introduce repetition. A close observation of cases in your own dental practice will be more convincing.

Probably diet as a factor in dental caries has occupied more space in our dental literature in recent years than any other subject. But it is my belief, which is based on a close clinical observation of cases extending over a period

Bangor, Maine

of years, that if a conflict is raging in the mind of a person, either child or adult, sufficient to induce unhappiness, dental caries is always present. This may be the result of malnutrition.

It does not seem unlikely that we are approaching the golden age when we may be able to control or conquer dental caries, as well as many other diseases, through a more thorough understanding of the intimate connection between emotions and the endocrine glands.

CONCLUSION

1. That dental caries is governed by the calcium metabolism.

2. That the question of metabolism on which depends the reaction of the saliva to bring about immunity or susceptibility to dental caries is the control of calcium by the endocrines.

3. That the derangement of the endocrine function in strong emotional reaction has been most convincingly demonstrated.

4. That the *initial* predisposing cause of dental caries is mental.

FEAR

a Dental Problem

By FRANK H. RICHARDSON, M.D.

■ Dentistry and medicine are professions which require exact knowledge. Men who practice them pride themselves upon the fact that they know the forces that they are dealing with, whether these are infection from bacteria, the reparative forces of the body, or the inexorable laws of hygiene. Yet physicians and dentists are notoriously prone to ignorance of one of the greatest forces in nature, if we are to judge by the way in which they ignore it in their daily practice. They are constantly being thwarted by it, annoyed by it, checkmated by it; yet comparatively few of them ever take the trouble to study it and see what can be done about it. This force is *fear*.

Now there are laws that govern fear; and if we would spend a fraction of the time in learning about them that we do in studying the laws that govern focal infection, for instance, we could learn to circumvent fear, just as we have learned to circumvent the action of harmful bacteria and of noxious drugs. Think what a delight it would be to practice either of the healing professions if we never had to be bothered about fear and what it does to render our patients intractable, obstinate, and unreasonable!

There is a great deal of nonsense in the minds of many otherwise sensible persons with regard to this matter of being afraid. They take a fatalistic attitude toward fear, being convinced that because their fathers were afraid of snakes



or their mothers cowered in terror all through a thunderstorm, they must of necessity be equally silly as a result of the laws of inheritance.

Science tells us otherwise. The excellent observations of Mary Cover Jones, under the direction of Doctor J. B. Watson, have shown us that the only fears that are not acquired after birth are the instinctive dislikes or shrinking from loud noises, and the terror that comes with loss of support. All the rest of the fears from which we suffer are taught us by our environment; and our environment is largely controlled by the adults with whom we live—in most cases, by our parents. So it is not Mother Nature who is responsible for our fears; the grown persons about us condition us, chiefly by their example rather than by their precept.

ACQUIRED FEARS

Fear of the dentist, which so many mothers believe is inborn in their children, is an excellent case in point. Children do not fear the dentist because of any instinctive revulsion toward him; they fear him because they have heard the ill-advised, silly talk that has been indulged in by persons who should have known better. In other words, they are "conditioned" to fear the dentist; although they might just as well have come to regard him as the friend he really is, had their parents only shown a little of the common sense with which they were born.

A dentist of long experience writes me of his conclusions along this line. They tally so closely with my own beliefs, that I am taking the liberty of quoting him. Almost any of the readers of ORAL HYGIENE would recognize him, if I were to give his name here. I am taking the following from his letter, by permission:



"In my practice I have almost made it a maxim that the earlier the child visits the dentist, the less likelihood there is of his having an unpleasant reaction. We have little trouble with two-year-olds, for example. In fact, the whole preschool group is rather easy to get along with in a dental way. The minute, however, that the child is thrown in the hopper of school associations he begins to reflect the 'mass conditioning' of these associations, and is likely to become a rather poor patient."

Dentists who take this matter of eliminating fear seriously will find it well worth their time to acquaint their patients with some of these facts, in order that they may realize the importance of impressing their children from the very first with the fact that the dentist is not to be feared and dreaded, but rather to be considered a friend. Children are quick to pattern their reactions closely upon those of their parents; and they can be made to anticipate a visit to the dentist, just as readily as to cringe at the mention of it.

APPRECIATE ADVICE

Parents are not offended by such thoughtfulness on the part of their dental adviser. On the contrary, they appreciate his desire to lessen their troubles and those of their children by instructing them

in time. They have become accustomed to getting advice from the various other agencies that deal with their children; why should they resent it when the professional man who is responsible for the dental welfare of their children offers them such sound counsel?

Instead of laying down abstract principles, suppose we examine some of the things that happen to the child who has an appointment with the dentist. Emotions are far easier to study in the child than in the adult, for they are not so prone to be disguised or distorted during these early days. And if we understand how fear may be avoided in the case of the child, it will not be difficult to apply to our adult patients the lessons learned.

One of the outstanding factors with reference to fear is that you cannot abolish it. True, you may suppress it, or try to! But it is there, all the time; and, like a fire that is suppressed without being extinguished, the chances are that it will emerge at some other point or in some other form, perhaps even less desirable and more dangerous and destructive than when first discovered. You may divert it, or you may substitute something else for it; but you cannot destroy it.

There is another thing that should be noted about fear; or about any other emotion,

for that matter: there is no such thing as an "emotional negative." In other words, telling a person *not* to think about a thing has the identical effect that telling him he *must* think about it would have!

A moment's demonstration will make this clear. Let us suppose that you are willing to place yourself in my hands, and do whatever I ask you to do, so far as it is possible. Now I say: "*Don't* think about the tip of your right forefinger. *Please* don't think about it, whatever you do!"

What happens? Why, of course, you immediately begin to think about the tip of that right index finger; and as long as I keep on telling you *not* to think of it, you will continue to thwart my wishes. And even though you were to succeed in thinking of something else for a moment, my continued admonition would bring your mind right back to the tabooed subject, just as long as I kept up my ill-advised prohibition.

At last you exclaim in exasperation, "Do be quiet. I am trying to do what you ask; but as long as you and the other persons in the room keep on babbling, I have not the slightest chance of complying with your request!" And you are exactly right.

WRONG APPROACH

Now let's apply these two bits of knowledge (which we

have known instinctively, and through long experience) to the child with an appointment at the dentist's. Long before, his mother begins breaking both laws. (a) She tries to suppress the fear that she assumes must exist in his mind, by telling him that there is nothing to be afraid of; instead of diverting his mind to other thoughts by talking about something else. Then, (b) seeing his obvious fear, she cheerfully orders him *not* to think about tomorrow's ordeal, because "the dentist won't hurt him." Is it any wonder that the results, according to what we know about the impossibility of the emotional negative, should be just the opposite of what she expects?

Next day he visits the office; and the dentist, unless he takes conscious thought of the effect of what he is doing, adds fuel to the fire. His first remark to the apprehensive child simply proves, to the child's satisfaction, that both mother and dentist are unmitigated liars. You know as well as I do what that remark is. It's the much repeated, never failing old chestnut, "I'm not going to hurt you!"

There is still another law about thinking and feeling that the physician or the dentist may well remember in dealing with his little patients. It is this. There are two distinct divisions, or layers,

of our minds: one is conscious, the other subconscious. We may more accurately call the second the unconscious mind; for it carries tucked away all sorts of emotions of which we may be totally unaware.

Now the conscious mind, that we know about and understand, is open to argument. It can respond to reason, when a reasonable argument is addressed to it. We use it in solving arithmetic problems, or in making up our minds which is the shortest way to go from here to there, or in other relatively unimportant matters.

THE UNCONSCIOUS MIND

The unconscious mind, on the other hand, is distinctly closed to reason, or argument, or intellectual approach of any sort. It is accessible only to emotional appeals. The important things of life, like marrying, being a Democrat or a Republican, owning allegiance to country and flag, choosing a wife (or being chosen by one!) and adhering to a religion or denomination, are for the most part emotional. And one of the most deeply rooted emotions in the whole unconscious mind is that of fear.

Now when we argue with the child about his fear, and become thoroughly out of patience with him because he persists in being frightened when he sees a knife or dental engine or some other

instrument which we have truthfully assured him we are not going to use on him, we are forgetting a third cardinal principle governing the workings of the mind. It is that, addressing an intellectual or reasonable argument to fear, which is grounded deep in the unconscious mind, is quite as silly and ineffective a business as it would be to address an argument in German to a man who can speak only his native language, French.

Yet how many of us can honestly say that we have never wasted our time and patience arguing with a terrified child (or adult either, for that matter) about how foolish it is for him to be afraid. Next time let's talk Latin, or French, to him instead of English; then at least we will not be surprised when our appeal goes unheeded, and our argument meets with no success.

RATIONALIZING

How many times have you and I told ourselves that we had a headache, or were utterly tired out, or had completely forgotten the correct address, when we knew we ought to make a social call on someone we cordially disliked? Oh no, we weren't lying about it; we *did* have a bad headache, we *were* terribly fagged out, we *couldn't* for the life of us remember where that confounded bore lived!

If we weren't lying, what were we doing? Oh, just "rationalizing"—making such a good excuse, in other words, that we actually believed it ourselves; whether or not we fooled other people (and it is quite probable that we didn't) we fooled ourselves, which was all that really mattered.

When the little boy forgets his appointment with the dentist, he is doing what the rest of us frequently do. He is making such a good excuse that he actually succeeds in hoodwinking himself! And what is most important of all, he does it so successfully that he suffers no loss of self-esteem in being so beautifully fooled.

So let's not blame him too much; instead, let's understand him. And let's be equally understanding of the man who tells us that he cannot afford the scientific treatment we are urging upon him, when what is really preventing him is fear of the pain it will entail. The more we argue with him, the more firmly we shall entrench him in his rationalizing. Rationalizing is too valuable a refuge for any one of us ever to give it up voluntarily. And until professional men recognize it for what it is when they see it in others (whether or not they are willing to recognize it and discount it when they see it in themselves), they will find themselves thwarted in what they are trying to do for their

patients, by this same elemental emotion, fear.

How will the sensible dentist, who understands some of these elementary principles about how the mind works, and is scientific enough to wish to employ them in his practice, proceed, in order to give his patients the most efficient service that it is within his power to offer them? What practical suggestions can we offer to help him in consciously applying this new refinement of technique?

Well, if he remembers our first law, that fear cannot be suppressed, though it can be diverted into other channels, or displaced by a substitute emotion, he will cease to deal with it directly, and will try to occupy his patient's mind with some different emotion. Anything that interests him will act as such a substitute—playing with the mirror or riding up and down in the chair for the tiny child; interesting books or amusements for the older child; attractive surroundings for the adult.

If he remembers our second rule, that you cannot at will cease to concentrate upon an emotion, but that the more you are told to stop thinking of a thing, the more intensively you will concentrate upon it, he will avoid all argument upon the painlessness of his proposed procedures, whatever the age level of his patient. Above all,

he will banish that utterly trite, banal remark, "Now, this won't hurt you"; and its blood brother, "The doctor never hurts good little boys," no matter how readily they spring to his lips, nor for how many years these remarks have served to bedevil his long-suffering patients. Telling anyone you will not hurt him is one of the best ways of announcing intentions that he instinctively realizes bode him no good. The dentist will avoid all discussion of hurting, all conversation involving mention of either fear or pain.

If we remember our third cardinal point, which concerns the two levels of the mind—a conscious level to which we can address logical or intellectual arguments; and an unconscious one, to which fear belongs, and which can be reached by the emotional appeal only—we shall cease that silly business of arguing, even when we know that what we are going to do will not hurt, and hence *should* not cause fear. It would not, if fear were a rational matter, to which logical argument could be applied. As it is not logical but emotional, we are wasting our time, or worse, when we try to convince the fearful child or adult, no matter how truthful we happen to be.

INSPIRE CONFIDENCE

A likeable, straightforward manner on the other hand,

with its expression of human interest combined with efficiency, inspires confidence not through reason or intellectual appeal, but through the emotional channel entirely. The patient feels, rather than reasons, that a man who impresses him this way is going to do everything humanly possible to help him; his unconscious mind tells him that there is little to fear from a dentist of this type, even though his reason could not give him proof of the fact.

How about our fourth law, that tells us that people can fool themselves with flimsy excuses much more effectively than they can others and that they are constantly doing so, to save their self-esteem? Remembering this will help us to keep our patience when the patient "forgets" his appointment, procrastinates about having us do what we know is necessary work, or advances silly or unconvincing arguments as to why he should be spared this or that procedure. Understanding all these subterfuges perfectly, we shall realize that it is fear of the pain involved that is deterring him. And so we shall not be diverted into breaking our other three rules, and arguing about pain, the very thing that is holding him back, and making him advance every other reason under the sun for not doing what he should. Disregarding this entirely, we shall make our approach on

the emotional plane, appealing to positive motives like good looks, comfort, and convenience, rather than holding up the negative ones that directly or indirectly concern pain.

Both of our professions have been seriously affected by the inroads of the cultists. We inveigh bitterly against the growth of those semi-religious, semi-medical groups that affect to disregard pain and suffering, and think only of pleasant things—and we continue to lose patients to them, because we consider it beneath the dignity of scientific

men to deal with the mind.

The sooner we recognize the frail stuff of which the human frame is compacted, and begin to take into consideration man's inherent shrinking from pain, the sooner we shall make the resistance to these charlatan "healers" that we owe to our patients and to ourselves. Dentistry has made enormous strides in its warfare against pain, with analgesic drugs and procedures that are little short of marvelous. When will its practitioners make an equally concerted and effective drive against its far less resistant associate, fear?

Children's Clinic
Black Mountain, N. C.

STATE BOARD EXAMINATIONS

Florida State Board of Dental Examiners, next examination, Jacksonville, June 22-26. Applications must be filed 30 days before examination. For information write, H. B. Pattishall, D.D.S., 351 Saint James Building, Jacksonville.

New Jersey State Board of Registration and Examination, annual examination, June 29-July 3. For complete information, write John C. Forsyth, D.D.S., 148 West State Street, Trenton.

California State Board of Dental Examiners, annual examination, San Francisco, at Physicians and Surgeons College of Dentistry, May 25; and in Los Angeles, Room 804, City Hall, June 15. Complete information can be obtained from Kenneth I. Nesbitt, State Building Annex, San Francisco.

The June Examination of the Ohio State Dental Board will be held at the College of Dentistry, Ohio State University, the week beginning June 22. For information write to Morton H. Jones, D.D.S., 1553½ North Fourth Street, Columbus.

FESTERING THOUGHTS OF A DENTAL ASSISTANT

Dear Doctor:



*"Do you still remember those
funny scratches on your brand
new pair of lower molar forceps?"*

"The time has come," the walrus said, "to talk of many things." And I guess that time has also come for me, even though, of course, I'm not a walrus, but just your faithful, hard-working assistant, preparing to forsake the aseptic life among the molars, and go the way of all flesh. And while we're on the subject, Doctor, I do think you could have registered a little genuine regret when I, oh so gently, broke to you the meaning of that fractional carat blossom on the fourth finger of my soft and lily-like hand. Those little orthodox phrases you spouted so glibly didn't fool me for a minute. How many times have I heard you assume that same hollow ring while assuring the delinquents that of course you hadn't worried about receiving payment for work done countless ages ago! Dear, oh dear, what a thought to be festering an innocent patient's cranium!

Those slightly peremptory letters that hinted darkly of something besides prosperity around the corner? "Well"—here your distraught gaze invariably fell upon me, hud-



"... thereafter I firmly insisted on yellow furniture polish."

dled meekly behind my desk. "Well—the girl, you see, takes care of the collections." Not being especially psychic, poor thing, she had no way of distinguishing the wheat from the chaff.

("THE GIRL." Consider, if you will, the hundreds of misplaced records, streaky roentgenograms, and erroneous accounts that have been magically explained and accounted

for by the use of those two words.)

But I am digressing. My main purpose in writing to you, Doctor, was to clear up, before I left, a few of those minor mysteries that are bound to accumulate within the space of a few years. And confession, they say, is good for the soul.

Do you still remember the time you fretted a week in

"... a dental laboratory is as good a place to shampoo your hair as any."



behalf of those funny scratches which had suddenly made their appearance on your brand-new pair of lower molar forceps? It was I who made the scratches, Doctor, I and my little bottle of shoe white, whose cover just wouldn't come off. But I'll swear I never touched them again. Forever after, I used the older forceps.

You may have forgotten the morning you searched frantically for your amalgam director, while I made suspiciously vague references to the drain. I just couldn't bring myself to tell you, Doctor, that

the synthetic blonde down the hall, who had brought her lunch from home, was guzzling potato salad with it!

These, of course, were all trivial matters; a far cry, indeed, from that critical knee-knocking episode of the mouthwash. That it was not a major catastrophe was due only to my quick and ready wit, which has been forced to come so many times to my rescue. Assuring Mr. Vanjuls-son, who is luckily a finicky old duck, that a disfiguring speck was polluting his nice crimson gargle-soup enabled me to snatch it right from be-

tween his lips as it were.

Perhaps you took note of the fact that thereafter I firmly insisted on yellow furniture polish.

You always seemed rather touched whenever I condescended to continue slaving after hours, in order to bid your very last patient and you godspeed. If you had been a bit more inquisitive, Doctor, you might have discovered that a clean porcelain sink, mild lathery soap, and freshly done towels can be put to more than one use; and that, if you're not too particular, a dental laboratory is as good a place to shampoo your hair as any. (I almost said—if any.) Concerning the dollars saved on my beauty bills—where did they go? Where all good little dollars go, my dear; right into manicures and theater tickets. Perhaps a few were rushed, warm and panting, to the bank. Who knows? Stranger things have happened, and are happening now, for that matter.

One teeny confession more.

That skilfully made speech of a year or so ago, wherein I not too subtly hinted for a slight increase in salary was not, as you might have supposed, the result of much arduous prayer and planning. I recall the day so well. Your wife brought you to work, wearing the loveliest new mink coat. (She, of course, not you.) Remember now?

I would suggest, Doctor, that with the next mink coat would go the stipulation that she keep it far away from the office, at least until it becomes a bit moth-eaten.

And now my young and tender soul feels lightened. Let me end on a happier note by adding that during my years of service I made it a point never to arrive late (that is, very late,) never to tell an unnecessary lie, and never to sock a patient, no matter what the temptation.

And, before long, I'll be bringing in the kiddies.

Respectfully yours,

DIAN GARDNER
Your Ex-Assistant

CHANGE OF MEETING DATE

**American Dental Association
meets July 13-18
San Francisco**

DOCTOR BROWN

TAKES HIS PLACE

By K. A. ROBINSON, D.D.S.

■ There goes Doctor Brown. He is our family dentist. I remember when he located here fourteen years ago, a big smiling fellow just out of school.

I asked him one day if he wasn't pretty brave to locate in our town of twelve hundred people when there were already two dentists, and he said he thought this as good a place to starve as any.

He put his office in up over the bank and I guess things were pretty tough the first two years. Then the older of the two established dentists passed away, and people began going to young Doctor Brown. Wasn't long until I began hearing Doctor Brown was a pretty good dentist. People said he was clean and sterilized his instruments, but was a little timid in extracting teeth. Guess he did have a lot of trouble taking out teeth, but people kept on going to him because he sterilized and Doctor Gable didn't.

Doctor Gable had been here for sixteen years and was a little careless about things. He had a sterilizer, but it broke a long time ago, and he never had it repaired. He just washed his instruments off under

the hydrant and put them away.

Doctor Gable did our dental work for years. I don't just remember how we started going to Doctor Brown, but we finally did. By this time he had a fine practice and was busy all the time. He was always going to dental meetings, and of course there were articles in the paper about Doctor Brown being away to this and that clinic. People said he was keeping up with the times. He bought an x-ray machine, and I happen to know he bought it on time. Was a funny thing how Doctor Brown seemed always to be busy but didn't seem to get ahead. He did buy a house on the installment plan and his wife and he did without a lot of things until they had it paid for. Doctor Brown got to look a little shabby and was always tired. Seemed he worked too hard and always had a worried look. Told me he worried a lot about his extraction cases, and I know he worried about financial matters too. Don't misunderstand me, Doctor always had A-1 credit. Kept his bills paid to the minute, but

nevertheless it kept him on the jump to do so.

It was about six years ago when things began to change for Doctor Brown. He had been sending his difficult extractions to a specialist in a neighboring town fifteen miles away, and since he had that x-ray machine he was finding a lot of those imbedded teeth, maybe they called them impactions. Anyway the Doctor up town was getting a lot of business from Doctor Brown.

HOSPITALIZED

I had some trouble with my jaw about that time and Doctor Brown took an x-ray and sure enough I had one of those impacted teeth. Well, Doctor Brown said there would be a different method followed in taking this one out. Said he didn't know what physical shape I was in and that I was to go to the hospital and he would help the specialist take it out. Gosh, that blow hit me between the eyes. With the wife and kids to take care of, my small salary wouldn't cover hospital bills and operations. But, nevertheless, I went to the bank and arranged to borrow some money, and the next morning reported at the hospital over in the city. They put me to bed and the parade began. A nurse took blood out of my arm, another nurse took a sample of urine, and then a young interne came in and gave me the best going over

I've ever had. I was surely relieved to find my old pump was in good shape, and he said I could stand the operation if my laboratory tests were all O. K.

About eleven o'clock, a nurse gave me a pill to take and I guess in an hour I got another one. By one o'clock I was feeling pretty sleepy; but a young nurse got me out of bed and walked me up to an operating room where I sat in a chair. Doctor Brown came in all dressed in a white gown with a mask over his face. He had on rubber gloves too. A nurse gave me a cup of mouth wash to use, and after that Doctor Brown went to work. He swabbed my mouth with something that didn't taste good and then injected the deadening medicine into my jaw. Hardly knew he was doing it, I was so sleepy. Pretty soon my jaw did feel funny and Doctor Brown stuck something in my mouth and asked if I could feel it. I couldn't, so Doctor Brown left the room, and the nurse took me out of this room into a real operating room. I will never forget it, sleepy as I was. Three nurses, the specialist, and Doctor Brown were in white from head to foot. They all had on rubber gloves and looked very business like. The nurse had me climb up on an operating table, and then they covered me up with sheets and things. I couldn't see what went on after that, but

I knew they were working on me. It didn't hurt, but was a bit uncomfortable with all the stuff that must have been in my mouth.

It was all over after a while, and I was put on a wheel table and taken back to my room. Here they put me to bed with some ice packs on my jaw, but I dropped off to sleep and nothing bothered me till they fed me that evening. My jaw was pretty sore but I was sleepy, so after a while I went back to sleep again. The next morning another interne checked me over, and said I could leave the hospital and report back home to Doctor Brown. I went down to the desk to pay my bill and found out everything including the surgeon's fee was only \$60.00. That was a surprise to me for my sister paid a hundred and fifty dollars at this same hospital just to get her tonsils out.

Well I've kind of got off talking about Doctor Brown and have been talking about myself. Guess everyone likes to talk about his operation.

From that time on Doctor Brown took all his cases to the hospital, and he and the specialist did them. It wasn't long till other dentists began copying Doctor Brown and taking their patients to the hospital, so I wasn't surprised to hear before long that everyone who had teeth to be removed was being taken to the hospital whether he had

those imbedded teeth or just the ordinary kind.

All the dental operations were done in the afternoon, after the general surgeons had finished with the operating rooms. The hospital added dental internes so that Doctor Brown and the other dental surgeons could do their regular extraction cases and be assisted by the interne. On the difficult cases, I understand the specialist does the work and is assisted by the dental surgeon and the interne looks on.

All of this was making a change in the way people took care of their teeth. Wasn't long until people began to reason, if they didn't take care of their teeth, they were faced with the expense of an operation and it looked like it would be cheaper to take care of their teeth.

Doctor Brown and old Doctor Gable couldn't begin to handle the people who were coming to their offices, so Doctor Brown enlarged his office space and had a young dentist come and help him. Doctor Gable made a lot of changes in his office too. He has a sterilizing machine now and is mighty busy. Doctor Brown later had to add another dentist, so he has two dentists associated with him now and two hygienists. Told me the other day he wished we would send our boy to study dentistry as there was such a demand for dentists

all over the country.

We have certainly changed our method of going to the dentist. We used to go whenever anything bothered us and tried to send the children every year before school began, but we don't take any chances now. We all go every four months. The hygienist cleans our teeth and makes those bite x-ray plates for us, and then Doctor Brown checks us over and does any necessary work.

At first we thought this would be quite a burden on our limited income, but we made a place in our budget for dental care and found out it doesn't cost as much as the wife and girls spend in beauty shops. We also think our health has been much better. We notice we don't have so many colds since Doctor Brown has been advising our family on diet. Why

Troy, Kansas

he even had my mother make some changes in her diet when he noticed her gums were shrinking under her dentures, and it not only stopped the gums from shrinking, but improved mother's general health.

Doctor Brown is different than he used to be. Doesn't have that worried look. Told me he never had to worry about his surgery cases any more for he knew his patients were in good physical condition when he operated on them, and if they had trouble during the night the interne would take the best care of them.

As for his financial worries, well, Doctor Brown and his associates could buy and sell most of this town, and even old Doctor Gable has a bank account for the first time since he started to practice.

FRAUD WARNING

■ The old racket of victimizing dentists by giving them worthless checks is being worked again. The latest complaint is from Omaha, Nebraska. These racketeers usually follow the same method. They come into the dental office and get an estimate on the cost of the dental service they require. They offer to pay a certain amount on account, say \$5.00, and give the dentist a check for \$10.00 expecting to be given the other \$5.00 in change. When the dentist passes the check at the bank, it is found to be worthless.

Dentists should be warned not to cash checks for any strangers even if they are making a part payment on an account, particularly if any change in currency is expected by the payee.

EDITORIAL COMMENT

*Give me the liberty to know, to utter,
and to argue freely according to my con-
science, above all liberties.—John Milton*

"IT CAN'T HAPPEN HERE"

■ With full apologies to Mr. Sinclair Lewis for the use of this title, we offer a comment on the dental scene. Lewis drew from contemporary European history a picture of what the United States might be under an authoritarian or totalitarian state. Whether such a government presents the "hammer and sickle" of communism on its flag or the "swastika" of facism, it is equally distasteful to the American spirit. Both systems survive by violence, by the destruction of personal liberty, by standardization. Both represent vicious dictatorships: one of the proletariat, the other of the plutocracy. Of the two, Lewis appears to be more fearful of the demagogy of vested interests and special pleaders.

Discussions in these pages would be frankly out of order if they attempted to encompass subjects that did not have some relationship to dentistry. What parallel, for example, exists between the flux and flow in American social and political life and in the dental profession? Do attitudes on the part of dental leaders reflect similar attitudes on the part of social and political leaders? Are there small groups of minorities organized in the dental profession who are pleaders of special causes similar to such blocs in American life? It is to attempt an answer in part that this editorial is being written.

Society is organic. Institutions are organic. They are created, have a life cycle, a decline, and death. The Roman Empire, the Whig party are examples. Each came into being to satisfy a condition of the time. When time swept on, conditions changed; these institutions faltered and died. The dying, however, may have been hard and prolonged. Recognizing this organic

nature of society, we would expect mass reactions of groups of men to follow certain behavior patterns. Man and his institutions being organic will also be imitative. The game of Monopoly or Mah Jong, an epidemic of transoceanic flights, styles in clothes and cars, the wishful thinking about a sure-fire dental desensitizer are examples of man's impressionability in America.

Dentists being men, we expect them to be seized with enthusiasms for the panaceas of their times. Have they been? It would appear that they have. Social workers and their techniques have been the vogue for the last five or six years. The care of indigents has evolved from a neighborly community function to a federal project. Dental care for the indigent has ceased to be something that dentists singly or in a dental organization could handle, so this activity has become a part of bureaucracy. The spirit of the times—reflected by the confidence in a centralized relief program—affected dentists for a time. Then, they, like many other citizens, began to reflect, to see the abuses, the favoritism, the domination by laymen, and *the cost*. The sentiment of this moment is definitely away from paternalism.

Health insurance as part of the Social Security program came in for considerable discussion by members of the profession. At one time many of us were interested in the *principle*. Then when we observed the complexities and the abuses under third party practice as represented by dental relief programs; when we saw the poor quality of care, the terrific administrative costs, we lost our faith in any belief that health insurance in the United States was economically sound or professionally desirable. Some of our dental colleagues, however, still believe in the authoritarian and totalitarian state and are still "whooping it up" for health insurance. All who disagree with their opinion are Tories—although this appellation has recently lost much of its sting.

Into what other fields of dental life do the pleaders for the totalitarian state carry their activities? In their advocacy of socialized dental care, do they sponsor kindred causes? I believe that they do. It is interesting to note that the same persons and the same organizations that favor some form of socialization in dentistry, as would be expected, also oppose independent dental journalism. Individual initiative, as represented by private practice, and freedom of expression, as represented by dental publications, free from the tyranny of politicians, are not in the spirit of the socialistic state. The American College of Dentists financed the health insurance

study of Simons and Sinai in Europe; the American College of Dentists also financed a report on dental journalism which was a vicious attack on independent publications. This organization comprises some of the eminent men in the dental profession who are neither for health insurance nor against freedom of the press. In this organization, however, there appears to be a minority bloc who are for health insurance and for a dental press censored and controlled by them.

Outside the dental profession such tendencies are being sharply curbed. By a unanimous decision the United States Supreme Court has again upheld the provisions of the Constitution with respect to freedom of the press. In the decision delivered on February 10, 1936, quashing the Huey Long-Louisiana newspaper tax case, Mr. Justice Sutherland, in referring to John Milton's battle for unlicensed printing, said: "He victoriously defended the right of every man to make public his honest views 'without previous censure'; and declared the impossibility of finding any man base enough to accept the office of censor and at the same time good enough to be allowed to perform its duties." There is no man or group of men in American dentistry talented enough to assume the rôle of censor or to be allowed control of the expression of opinion within the profession. Regardless of the method, whoever tries to shackle the press shows himself to be an enemy of American institutions. The Supreme Court upheld this principle: "A free press stands as one of the great interpreters between the government and the people. To allow it to be fettered is to fetter ourselves."

In the Russian, Italian, or German variants of the totalitarian state, the first objective was to destroy the press. The propaganda intended to discredit the independent dental press that has functioned longer than any society publication represents the first move on the part of dictators to dominate American dentistry. "It Can't Happen Here" in America so long as debate is free and open; "It Can't Happen Here" in American dentistry so long as members of the profession have publications open to them in which they can express opinions and exercise the critical right without fear of reprisal, free from tyranny of organized minorities.

Edward J. Ryan

DR. HARTMAN EXPLAINS NEW DENTAL FORMULA IN CHICAGO

■ "I tried it today on three patients. It only worked on one."

"It better be *good*, my patients are telephoning and writing and asking me about it every day."

"An eleven year old boy told me this morning I couldn't touch his teeth until I get some of it."

"It's great—I've been using it all week. Works every time."

"I just heard something funny about a newspaper columnist. He wrote a big story about the fun he had having a tooth filled, said this new solution killed all the pain. Now he's afraid to leave his office for fear of being mobbed by his readers."

Thus Chicago dentists talked excitedly about Doctor Leroy L. Hartman's new dentine desensitizer as they swarmed into the Grand Ballroom of the Stevens Hotel, crowded the balcony above, long before the hour set for the meeting on the evening of January twenty-seventh. Thirty-five hundred of them rose to applaud Doctor Hartman as he appeared on the platform to present, before a special meeting of the Chi-

cago Dental Society, a detailed report on his new formula. Among the dentists some were openly skeptical, some merely hopeful, some enthusiastic, but all were happy at the prospect of hearing from Doctor Hartman himself the story of his twenty year search for a solution to anesthetize sensitive dentine.

To Doctor Hartman, a modest, dignified scholar of 42, his appearance before a Chicago audience was a happy occasion, too. Now a professor of operative dentistry in Columbia University's School of Oral and Dental Surgery, he was eager to tell his colleagues of the work he had done since he received his dental degree from Northwestern University in 1913; of the formula for Hartman's Solution he had just presented to the dental profession the week before at a New York meeting.

For eighteen years, Doctor Hartman told the dentists, he had made an intensive study of sensitive dentine based on accepted theories of transmission of sensation through the dentine. Two years ago, he discarded old ideas, based his studies on a new theory

that dentine contains lipoids (fat-like bodies soluble in organic substances such as ether and alcohol) capable of transmitting sensation in and through the dentine. Proceeding on this theory, Doctor Hartman decided that a satisfactory dentine desensitizer should contain a chemical compound that would dissolve lipoids and another which was itself soluble in lipoids.

Not by accident but through a process of scientific reasoning, Doctor Hartman reported that he arrived at his new formula. For the lipid solvents he selected ethyl alcohol and ether, and for the compound soluble in lipoids, thymol. With these well known ingredients Doctor Hartman explained that he created a formula capable of producing a reversible reaction with lipoids. The thymol in solution, he believed, acted on the lipoids in the dentine interrupting the transmission of painful sensations during cavity preparation.

While dentists reached hurriedly for their pencils, Doctor Hartman repeated this simple formula, which he had perfected only after many experiments with ingredients mixed in varying proportions:

FORMULA BY WEIGHT¹

Thymol1½ parts
Ethyl alcohol1 part (95%)

¹Hartman, L. L.: A New and Effective Means for Dentine Desensitization. DENTAL DIGEST 42:42 (February) 1936.

Sulphuric ether
(anesthesia)2 parts

1. Solution should be kept tightly corked in a brown glass bottle.

2. One-half ounce is sufficient for 200 applications.

3. A fresh solution should be prepared more frequently when the weather is dry.

4. A stopper with a tin lining is preferable.

Cork stoppers changed frequently are satisfactory.

Rubber stoppers should not be used, because they will be dissolved.

Glass stoppers become clogged with the thymol and will allow the ether to evaporate.

In describing his method of applying this solution, Doctor Hartman suggested that the use of the rubber dam was preferable, although cotton rolls could be used if the gums surrounding the tooth were varnished first, and the cotton rolls changed immediately after the application. He advised the dentists to make a topical application of the solution with a moistened pellet of cotton, not saturated, directly to the dentine or caries; keep this pellet in contact for 1 minute in children's teeth, 1½ minutes in adults' teeth; remove the pellet; and direct a blast of warm air to the area of application.

Continuing the discussion of his desensitizer, Doctor Hartman emphasized the fact that it does not affect enamel but must be placed directly on the dentine, that it is not intended to anesthetize the pulp of the tooth as procaine does. The solution, he warned,

should not be allowed to come in contact with the gums or tongue for fear of burning. In case of irritation he recommended the application of sodium bicarbonate for relief.

As to the results he had obtained by extensive tests with his dentine desensitizer made on volunteers in the clinics of Columbia School of Oral and Dental Surgery, Doctor Hartman said that, "Of more than 500 applications made, the results in only a few cases could not be considered ideal."

In concluding his discussion, Doctor Hartman appealed to his audience to aid him in making further and even more convincing tests of his desensitizer:

"New fields for research lie before us," he said, "and much more work is yet to be done. I should like to ask the dental profession to assist me in compiling data which will prove of value to all of us."

Following Doctor Hartman's report on the scientific background of his formula, his paper was discussed informally by three of the leading anesthetists of Chicago dental schools: J. Roy Blayney, D.D.S., University of Illinois; Charles W. Freeman, D.D.S., Northwestern University; P. G. Puterbaugh, D.D.S., M.D., Loyola University.

After complimenting Doctor Hartman on having written another chapter in the history of dental anesthesia, Doctor

Blayney suggested that further study was necessary to determine just what, if any, effect Doctor Hartman's solution has on the dental pulp. He asked that caution be exercised in the preparation of cavities under such an anesthetic to avoid an epidemic of exposed pulps. Doctor Freeman expressed enthusiasm over the fact that Doctor Hartman's discovery was not just an accident but the result of a careful, scientific approach to the problem of sensitive dentine. He also warned against the danger of misuse of this new preparation. Doctor Puterbaugh prophesied that Doctor Hartman would probably always have a greater amount of success with his solution than other dentists, because he had perfected and used the correct technique of application.

Doctor Hartman answered the questions raised in the discussions and in closing reminded the audience that his solution was intended for use in the treatment of sensitive dentine, cavity preparation, and the simple preparation of crowns, not as a substitute for procaine.

As he left the platform, Doctor Hartman's Chicago colleagues crowded around to congratulate him on his contribution to dentistry and wish him further success in the research he will continue at Columbia University.

MODERNIZING THE DENTAL OFFICE

BY ARTHUR WALSH*

■ Progress of the science and the profession of dentistry is so steady, even through such periods as the "Early Thirties," that dentists have to be modernization-conscious in order to keep up with the procession.

Many dentists have recently shown keen interest in modernized offices and modern equipment through inquiries sent to the Federal Housing Administration concerning the modernization provisions of the National Housing Act as they apply to the dental profession.

These inquirers had heard or read that the National Housing Act made it possible for a dentist with a reasonably good financial reputation to have once more a clean, bright, well lighted office with modern and efficient equipment—the mark of merit for the modern dental practitioner.

It is natural for every dentist to want his establishment to be up-to-date in its appointments and in its

equipment. The unavoidable neglect of such items during the recent lean years has been far more painful to the dentist than to his patients.

The National Housing Act does make modernization of dental offices and equipment not only possible, but convenient. The money for such purposes, however, does not come from the Federal Housing Administration, which administers the Act, nor from any other Governmental agency. It is all private money, advanced by banks and other private financial institutions which are insured against loss by the Housing Administration.

Each loan is a private transaction between the borrower and the lending agency. The bank does not have to advance the money, and will not advance it, unless it is reasonably certain that the loan will be repaid within the time limit set. All the terms are agreed upon between the lender and the borrower, within the limits set by the Housing Administration, and

*Assistant Federal Housing Administrator, Washington, D. C.

repayments are made direct to the lending agency by the borrower.

All charges, including interest, cannot exceed the equivalent of \$5.00 discount for each \$100 face amount of a one-year monthly installment note. Repayments must be made in equal monthly installments over a period up to five years.

The amount of the loan is determined by the costs of proposed improvements and the financial responsibility of the borrower. If the dental office is in a private dwelling, or a house with four or less dwelling units (such as a converted apartment house), the maximum limit is \$2,000. If the office is in a business or professional building or a large apartment house, the maximum limit is \$50,000.

Proceeds of modernization loans insured by the Federal Housing Administration can be used legally only for modernization of the property or for purchase and installation of certain types of machinery and equipment. No part of the money thus obtained can be used for anything else.

While few individual dental surgeons would want \$50,000, this maximum provision makes possible the establishment of dental centers by a group of dentists, or the establishment of a dental department in a hospital or other medical building.

Almost all structural repairs, alterations, and additions are eligible for insured modernization credit. Work rooms, rest rooms, operating rooms, and laboratories can be constructed by individual dentists or by groups.

In regard to equipment, however, eligibility as a general rule is restricted to those items which are permanently installed or are peculiar to the dental profession and necessary to the operation of a dental office. Strictly portable instruments are not eligible, unless they are part of a permanent installation.

Dental cabinets are eligible, but not the instruments which go into the cabinet; permanently installed drilling equipment, but not individual drills bought separately. Lathes, dental basins, surgical cuspidors; hydraulic chairs or other permanently installed dental chairs; x-ray installations; current transformers; certain types of solution warmers are eligible.

If a dentist wishes to buy certain equipment under the Modernization Credit Plan and is in doubt as to its eligibility, he may write direct to the Federal Housing Administration, Washington, D. C., sending a description and picture of the equipment in question. He will receive a definite ruling on the matter.

Usually, however, the equipment manufacturer or

dealer has this information already, and the lending agency knows the general rule that such equipment must be permanently installed or must be peculiar to the dental profession and necessary for the operation of a dental office.

The manufacturer and the salesman of dental equipment should thoroughly acquaint themselves with the terms of the National Housing Act. Its potentialities broaden the field of possible sales. Dentists who have been unable to purchase necessary equipment will be able to do so

under this plan, and those interested in the sale of this will find a knowledge of the Modernization Credit Plan of mutual benefit to buyer and seller alike.

The short and sensible road to modernization for any dentist wishing to bring his office and its equipment up to date is to see his banker. If that particular bank does not have a contract of insurance with the Federal Housing Administration, a neighboring institution is virtually certain to be in a position to make such loans.

DENTAL MEETING DATES

Thomas P. Hinman Mid-Winter Clinic, Atlanta Biltmore Hotel Atlanta, Georgia, March 9-10.

American Society for the Advancement of General Anesthesia in Dentistry, regular meeting, Monday evening, March 23, Hotel Montclair, New York City.

Alabama Dental Association, annual meeting, Tutwiler Hotel, Birmingham, April 14-16.

Old Dominion Dental Society, twenty-third annual meeting, Norfolk, Virginia, April 16-17.

American Board of Orthodontia will meet in St. Louis, Mo., April 17-18. Orthodontists desiring to qualify for a certificate from the Board should secure the necessary application blank from the secretary, Charles R. Baker, 636 Church Street, Evanston, Illinois.

American Society of Orthodontists, annual meeting, St. Louis, April 20-23.

Massachusetts Dental Society, seventy-second annual meeting, Hotel Statler, Boston, April 28-May 1.

Massachusetts Dental Hygienists' Association, annual meeting, Hotel Statler, Boston, April 28-May 1. The President's Luncheon will be held at the Copley Plaza, April 29.

Tennessee State Dental Association, sixty-ninth annual meeting, Hotel Peabody, Memphis, May 5-6.

Georgia State Dental Association, sixty-eighth annual meeting, Atlanta, May 11-13.

North Carolina Dental Society, sixty-second annual meeting, Carolina Hotel, Pinehurst, May 11-13.

Dental Society of the State of New York, sixty-eighth annual meeting, Waldorf-Astoria Hotel, New York City, May 12-15.



Ask ORAL HYGIENE

Please communicate directly with the Department Editors, V. CLYDE SMEDLEY, D.D.S., and GEORGE R. WARNER, M.D., D.D.S., 1206 Republic Building, Denver, Colorado, enclosing postage for a personal reply.

Material of general interest will be published each month.

LEUKOPLAKIA SYMPTOMS

Q.—I have a patient, a man, 65, who about four months ago developed a peculiar condition on left side of tongue and cheek. It is a white line about one-half inch wide that runs from the corner of his mouth to the third molar region. He says that it feels as if it had been burned with hot soup. He does not use tobacco in any form; he wears a removable upper bridge on that side which he has had several years; several gold inlays in his lower jaw on that side; and there are no devitalized teeth in his mouth. His general health is good. What is this condition and how can it be corrected?—T. J. K., Tennessee.

A.—Your letter presents a case which is a little difficult to diagnose from this distance. The only disease that seems to fit your description is leukoplakia, and as leukoplakia can result from irritation arising from any source, I would be suspicious that the denture or the teeth or both on that side of the mouth are responsible for irritation of these structures which show

the white line or area. The fact that your patient discovered this condition just four months ago does not mean that that is when it first appeared; it may have been there for years.

The sensible thing to do is to be sure that there is no roughness on the teeth or denture on this side of the mouth, that there is no pinching of the tongue or cheek, and when all this is done you should watch the patient, examining his mouth once in two or three months to see if there is any change in this white line which you describe. If it is leukoplakia and there is no rapid change taking place, there is nothing to worry about. If you find that the area is broadening or that it is getting hard and assuming a warty appearance, you should at once have him consult a good dermatologist. There is always some danger of leukoplakia from whatever cause becoming malignant; therefore, this should be watched with particular care.

—GEORGE R. WARNER.

MULTIPLE CARIES

Q.—For five years I have been taking care of the teeth of a young man, now 25, who is well built. His bones are large and he is 6 feet tall.

For the first three years all I found wrong was an occasional small cavity. In 1933, shortly after I had examined his teeth and pronounced them perfect, he presented himself again. To my amazement, his teeth were in a deplorable condition. I had to extract all molars, and place restorations in all the remaining teeth. Since then, he comes in every few months with new cavities, everything from class 1 to class 5. Cavities even appear *labially* and *buccally*, near occlusal surface instead of cervically. Incidentally, he has three fourth molars appearing. The enamel of his teeth is turning to a chalky white which is easily pierced with an explorer. Although his teeth are sterilized well before the placing of restorations, the cavities continue to develop.

He told me that in 1933, for about three months, he chewed each day a package of a popular brand of candy that appears on the market in many flavors, until I told him to discontinue it. His health seems to be perfect otherwise. Can you give me any explanation of this constantly recurring decay, or advise me what to do to check it?—H. D. R., New York.

A.—The case discussed in your letter is not unusual so far as the multiple caries is concerned but is rather unusual starting so suddenly at twenty-five years of age and in such a healthy person. While there is a great deal that we do not know about caries, I think it might be safely said that this sudden onset of caries in this case

most likely is due to some profound change in this young man's general condition and I certainly would advise his being put in the care of the best internist you have in your city. You are apparently doing all you can from a purely dental reparative point of view and you should now have the help of a medical man.

I should appreciate very much hearing from you again as to the outcome of the thorough physical examination in case you carry out that suggestion.—GEORGE R. WARNER.

ORTHODONTIC TRAINING

Q.—I am 39 and have been practicing dentistry for fifteen years. There is one branch of dentistry in which I am particularly interested, orthodontia. I have never done any of this type of work, as I do not have enough working knowledge of the subject to try to do any of it. Will you please advise me as to the proper procedure to follow to gain enough knowledge to start the practice of orthodontia, as I am sure I would like to in time limit my practice to this branch alone.—J. B. B., Texas.

A.—It happens that the writer has just been reading a series of articles and editorials by the orthodontists on the subject of training dentists to practice orthodontia. Part of this discussion has been related to the advantages of the university dental school orthodontia course over the courses given in private schools or in private offices.

I believe it can safely be said that it is the consensus of opinion of those who have had the most experience in teaching orthodontia that one cannot acquire a working knowledge of orthodontia, a knowledge that would enable one to handle all cases of or-

thodontia with safety and satisfaction to the patient and the feeling on the part of the operator that he had done the best he could, with less than two years of intensive study. So it would seem certain that a course of a few months would be totally inadequate.

Excellent courses in orthodontia are given at the University of Illinois Graduate School of Orthodontia, of which Doctor F. B. Noyes, 1838 West Harrison Street, Chicago, is in charge; and in the Northwestern University Dental Department, McKinlock Campus, 311 East Chicago Avenue, Chicago, which is under the supervision of Doctor Abram Hoffman. It might be well for you to write these men stating your case as you have to me and thus get the opinion of experienced teachers.—GEORGE R. WARNER.

FOOD ALLERGY

Q.—I have a patient who recently moved here from the Middle West. She seems to be susceptible to orange juice and bacon but particularly so to this kind of juice. She develops a single sore usually near the corner of her mouth on the labial mucosa. Lately, there are several sores that extend posteriorly to about the second buccal region. These sores look like canker sores, but I do not think they are.

They are painful, and there is an area that is tender and swollen. The center of the sore is filmy white as a canker, and sometimes it seems as though there was a punched out appearance.

This patient is about thirty, and, as far as I know, has a better balanced diet than the aver-

age. The whole point is that she is idiosyncratic to oranges, and nothing has been found to apply to the lesions that will cure them.

It would seem like a stomach disturbance in which all she has to do is wait for it to pass. Sometimes these sores have burst and she has let the liquid ooze out. She bit into a piece of cake, not knowing it was orange flavored, and although she did not eat any of the cake a sore developed within twelve hours, which is about the time they usually take to appear. This shows that her trouble is not mental, since she did not know the cake was flavored with orange. If she takes no food or takes a liquid diet after the appearance of the sores they usually disappear within twelve hours. They seem to last longer lately. She discovered this susceptibility about two years ago by eliminating different foods for periods of one week. She deliberately ate a whole orange at the time and had sores for five weeks. Anything, such as silver nitrate, put on the sore spreads it.—N. J. P., Maine.

A.—The case described in your letter is apparently one of food allergy. Persons afflicted by food allergy may be allergic to one or a great number of foods. Their reaction to the food or foods to which they are allergic does not always depend upon the amount of the food. As in your case a small amount will set up the same chain of symptoms that a larger amount does. So far as I know there is nothing to be done in a case of food allergy except to abstain rigidly from the use of that particular food or foods to which the person is sensitized. There probably is not much that can be done for the lesions locally.—GEORGE R. WARNER.

DEAR ORAL HYGIENE



*"I do not agree with anything
you say, but I will fight to the
death for your right to say it."*

—VOLTAIRE

PUBLICITY IN REVERSE

I have just read with pleasure your editorial, **PUBLICITY IN REVERSE**.¹ Our patients came into the office demanding an application of this wonderful painkiller. Some of them seemed to think that, because it was unknown to us, probably we were slipping just a little bit, but the old saying is, "let nature take its course."

The thing about your editorial which strikes me most forcefully is the comment on the contribution by Mr. Benarr Macfadden, publisher of *Liberty*, who claims to be a health educator. I saw that issue of *Liberty*, December 14, 1935, picturing the little boy with the bandaged jaw. It was a direct slam at the dental profession, and I am positive that, had this referred to the medical profession, there would have been an immediate demand for an apology from Mr. Macfadden. The American Medical Association does not tolerate for even a split second such publicity. Why is it that the American Dental Association fails to act in a positive, courageous manner like the American Medical Association?

¹Editorial, **Publicity In Reverse**, **ORAL HYGIENE** 26:64 (January) 1936.

I am always at a loss to know why the officers, the leaders of our association, do not demand an apology in the cases such as that of Mr. Benarr Macfadden. A courageous and positive leadership always strengthens an organization. Again I assure you that your editorials are always full of information and interest.

—VINCENT J. CONNELLY, D.D.S.,
Bank and Insurance Building,
Dubuque, Iowa.

SHAKESPEARE MISQUOTED

Permit me to say that I have been a reader of **ORAL HYGIENE** virtually ever since its inception. This, together with a respect for the classics, leads me to call to your attention the fact that Doctor Henry C. Woods² on page 78 of your anniversary number, badly misquotes Shakespeare's celebrated lines which really read as follows:

"Who steals my purse steals
trash,
But he *that* filches from me
my good name
Robs me of that which not
enriches him,
And leaves me poor indeed."

Othello, Act 3, Scene II.

²Woods, H. C.: In Defense of Doctor Richardson. **ORAL HYGIENE** In **DEAR ORAL HYGIENE** Department 26:78 (January) 1936.

The italicized words indicate the errors.—A. M. KERR, M.D., Supervisor, Health Instruction, Pittsburgh Public Schools, Pittsburgh, Pennsylvania.

Editor's Note: The Oxford Edition of Shakespeare, 1623, and subsequent editions give the last line of this quotation from Othello as: "And makes me poor indeed."

THE ANNIVERSARY ISSUE

We received our copy of ORAL HYGIENE this morning, and wish to congratulate you on your twenty-five years of existence. We have been in practice for thirty-five years, so have had your magazine since it came out. We always enjoy reading it and look forward to the coming of each issue. We hope the future will hold even better prosperity for you than you have enjoyed in the past.

Now, we have a question on which we would like some information, if we can get it through your readers or otherwise. We are in a city of 20,000 population. The dentists of Bradford have maintained a school clinic for the past twenty years. We have worked alternately one half day per week, taking care of emergency work for children of the first five grades. The patients are brought to us by the school hygienist. Now, the school board wishes to take over the clinic and establish it in one of the school buildings. What do you think should be the proper set-up of relations between the school board and dentists with reference to the clinic?

Bradford is fortunate in that we have a dentist for Mayor of the city. Doctor Hugh Ryan was elected at the last election.—S. S. BURT, D.D.S., 22 Main Street, Bradford, Pennsylvania.

DENTAL ECONOMICS

While admitting that a large

majority of the American people do not receive adequate dental care, many of our dentists are strongly opposed to any plan of panel or socialized dentistry. They would much prefer to have the masses of our citizens so situated economically that each person could select his own dentist and pay for his own work after the manner in which dental practices have been conducted in the past.

It can also safely be said that 90 per cent of the American people do not desire socialism or communism. They wish to have the old capitalistic system modified as little as possible, but sufficiently modified to allow every man willing and able to work to obtain for his family that adequate standard of living which they believe the productive capacity of the country is capable of yielding.

During the depression attempts have been made to solve the banking problem, the railroad problem, the farm problem, the labor problem, and others—each by itself instead of in its relation to the whole. And dentists have been saying and writing a great deal about how to solve the dental problem.

This is only treating symptoms. The cause of the whole trouble must be found and corrected. In that way not only the dental problem but all other problems will be solved. It will well repay dentists to direct their attention to the general situation.

Economists seem to be agreed that, to reach the highest possible standard of living, national consumption must balance national production at the highest level of production that the country can attain. The masses of the people must be allowed sufficient purchasing power to absorb all the goods and services that the country can produce. In other words our troubles are due to the concentration of wealth

and income. During the prosperous 1920's too much of the profits of industry went into the hands of a comparatively few people. These people, having more than they cared to spend on their living expenses, invested the surplus in new productive enterprises. But the masses of the people did not have sufficient purchasing power to buy this increased production; construction stopped; and the collapse was upon us. If the national income had been more equally divided more money would have been available for the purchase of goods and services, less money available for production, and the balance between consumption and production would not have been so rudely disturbed.

While there are many ways in which a wider distribution of wealth can be brought about, Stuart Chase says that the most divine way of doing so and President Roosevelt says that the most effective way of doing so is by means of increased income and inheritance taxes. Despite what the President says the present administration has not used this method to anything like the extent to which it could be used. With about 25 per cent of the national income going for taxes, we can easily see what a tremendous force we have at our disposal. It is a force over which the government has full control. There is no question of constitutionality, it involves no experiments, and requires no new boards or bureaus. By shifting the incidence of taxation from the poorer to the richer classes, a great difference in the present relative position of the two classes could be brought about.

Why cannot the members of the dental profession unite and bring all the pressure they can to bear upon our Senators and Congressmen to utilize such a simple modality in curing the economic problems of all of our

people? Continued opposition to socialized dentistry without support of a constructive alternative will get us nowhere.—JOHN BARR, D.D.S., *Redmond, Oregon.*

DENTAL EDUCATION FOR CHILDREN

Last fall I was appointed Supervisor of Oral Hygiene in the Duluth Public Schools, and since that time, I have been going through the dental literature, looking for material that will be a help in carrying on the work.

We have two oral hygienists in our department and our work is confined to examinations and educational work in the first six grades. I thought it might be possible through the cooperation of ORAL HYGIENE, to locate men in positions similar to mine, in various parts of the country, and thus exchange ideas that would enhance the effectiveness of oral hygiene work in the public schools.

You, no doubt, have some suggestions of dental literature that would be enlightening which I would be glad to receive.

Any way in which you cooperate in furthering this cause, will be greatly appreciated.—B. C. AMUNDSON, D.D.S., 2031 West Superior Street, Duluth, Minnesota.

A SOLUTION FOR CAVITY PREPARATION

In October, 1931, I presented a lecture before the Rochester Dental Society, and then in December of that year gave a clinic at the Better Dentistry Meeting at the Hotel Pennsylvania. The subject discussed was a technique which was developed using alcohol, ether, menthol, gum camphor, and ethyl chloride for cavity preparation.

In 1932, in the second edition of my book, *BUSINESS CONDUCT OF*

AN ETHICAL PRACTICE,¹ there appears a chapter entitled "Practice Building Resulting From Pain Elimination by a Simple and Effective Method." I recommended the use of alcohol, ether, menthol, and gum camphor in cavity preparation. Because of the extreme volatility of the chemicals used, we felt it was more advantageous to permit them to evaporate into the tooth structures than to escape from a bottle. Therefore, I advised applying the drugs separately in the tooth. To further augment rapid volatilization and insure a prompt obtundence, I applied a short spray of ethyl chloride upon the pledget of cotton previously moistened with the aforementioned mixture.

The theory of the presence of a lipid substance in the dentine still remains to be evaluated. The Hartman formula, which bears a striking resemblance to the one in my book, must have

the same limited use. Neither of these formulas can eliminate the initial pain of bur entry into the cavity. Neither of these drugs is suitable for pulp extirpation.

The obtundent action lasts but a few minutes, and with rapid operation it is possible to prepare a simple cavity. It is an ideal method for gingival erosion cavities wherever they are accessible to the spray of ethyl chloride. It is not, however, a panacea but a valuable adjunct to dental practice. As yet no drug has been discovered for painless cavity preparation, which can be substituted for procaine anesthesia or even for gas analgesia.

I am not discrediting any research activities on the part of Columbia University and Doctor Leroy Hartman. Having worked for years along similar avenues of thought, I can appreciate the zealousness of these contemporary investigators in attempting to give humanity something to alleviate pain.—S. J. BREGSTEIN, D.D.S., 7825 Fourth Avenue Brooklyn, New York.

¹Bregstein, S. J.: *The Business Conduct of an Ethical Practice*, New York, Dental Items of Interest Publishing Company, 1932.

NEW DATES FOR A.D.A.

Meeting dates for the American Dental Association have been changed to July 13-18, San Francisco

L A F F O D O N T I A

Editor (growling): "These jokes are all old. What we want are original jokes, something up to the minute."

Joker: "Well what about the one concerning the man who was electrocuted this morning? Is that current enough?"

Girl: "The man I marry must be as brave as a lion, but not forward; handsome as Apollo, but not conceited; wise as Solomon, but meek as a lamb; a man who is kind to every woman, but loves only me!"

Her Boy Friend (enthusiastically): "By jove! How lucky we met!"

Wife: "Will you love me when my hair has turned to silver?"

Hubby: "Why not? Haven't I stuck with you through brown, red and black?"

A man who had been dining out six nights in succession, showed up at home for dinner on the seventh evening. When he was seated, his wife arose and addressed the other occupants of the table:

"Children, we have with us tonight a guest of whom you have all heard, even if you do not know him personally. He is a man who has a reputation for good cheer in every club and lodge in the city, and this evening we have the honor and pleasure of being numbered among the admirers of his entertaining qualities. It is with the greatest pleasure that I present to you—your father!"

The man from Oklahoma had just arrived in Boston.

"Hey officer," he said to a policeman, "can you tell me where there is a good place to stop at?"

"Just before the at!" the officer replied, continuing down the street swinging his night stick.

Small Boy (to his mother): "Mummy, may I go to swim?"

Mother: "Certainly not, my dear; it's far too deep."

Boy: "But daddy is swimming."
Mother: "Yes, dear, but he's insured."

Tired Business Man (aboard the evening train for home): "I've had a hard day. One of my office boys asked the afternoon off to attend his aunt's funeral. So, being on to his scheme, as I thought, I said I'd go along too."

Friend (chuckling): "Good idea! Was it a good game?"

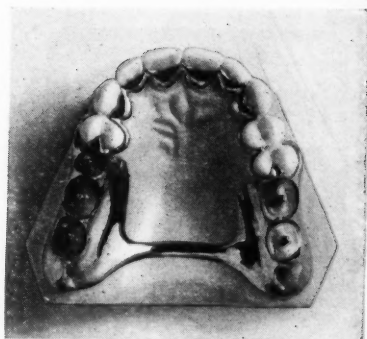
Tired Business Man: "That's where I lost out. It was his aunt's funeral."

First Woman: "Well, I must be off. I've an appointment with my mother."

Second Woman (giving an astonished laugh): "My dear, is it possible that you have a mother living?"

First Woman (laughing in her turn): "Yes, oh yes. And do you know, I don't believe she looks a day older than you."

**Be able
to say:**



"It's Gold"

It pays to be able to tell your patients: "I'm using gold for your case." No further words are necessary to convince them that a quality material is being used in their mouths, and this creates a feeling of assurance and confidence which makes for continued satisfaction. The margin of safety in NEY tested partial denture golds is a valuable addition to their precious metal content.

NEY-ORO G-3 \$2.07 per dwt.
NEY-ORO 5 \$1.89 per dwt.
NEY-ORO 6 \$1.71 per dwt.

(The above alloys are all gold color)



THE J. M. NEY COMPANY

Est. 1812

HARTFORD, CONN.

CHICAGO, ILL.



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CAMPHO-PHENIQUE

you assure yourself of prompt antiseptic action with absolutely no irritation.

Pleasantly refreshing to the taste, Campho-Phenique also acts as an analgesic . . . promotes granulation . . . and generally aids in healing.

Campho-Phenique has become a cherished item in the armamentarium of dentists throughout the country. They depend on this antiseptic-anodyne agent in

—root canal therapy—when packing extraction sockets—in the treatment of gingival margins and lesions—etc. and etc.

Actually try Campho-Phenique to see how truly effective it is. Once used, you will make it a standard part of your armamentarium.

Campho-Phenique is available from your supply house or at your drug store.

CAMPHO-PHENIQUE CO.

500-502 No. Second St.

St. Louis, Mo.

Comfortable HANDS despite frequent WASHING



Certainly no man has more reason than a dentist for needing smooth, clean-looking hands. And certainly no man gives his hands more frequent washing with strong solutions that cause dry, red, rough, chapped skin.

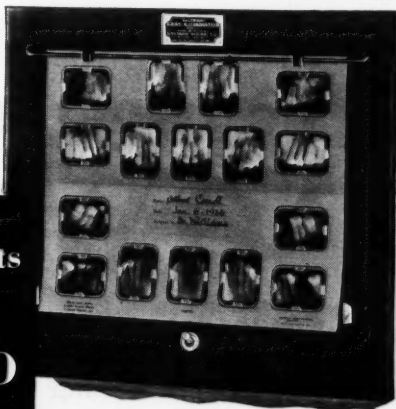
To keep your hands smooth, soft and comfortable—use Campana's Italian Balm. This famous skin softener acts *more* quickly and *costs less* to use than anything you have ever tried before.

Get an Italian Balm Dispenser for convenience and economy. Dispenses one drop at a time. Ask your druggist for the 59c Italian Balm Dispenser Package. Then call Western Union, ask to have your Dispenser installed. Pay the Messenger 10c for this service (Campana pays the rest). This special service good only while dealers have these special 59c packages.

Campana's
Italian Balm

THE ORIGINAL SKIN SOFTENER
"America's Most Economical Skin Softener"

When Your Patients
SEE and
UNDERSTAND
Actual Conditions
Your Practice Grows



WITH radiographs you can show the patient a complete picture of the actual condition of his teeth. Then your explanation of needed treatment has full significance. Present these important facts in this effective way... Mount the radiographs in Eastman Dental Film Mounts... Use the Eastman X-ray Illuminator to display them.

FILM MOUNTS

Eastman Dental Film Mounts provide a means of viewing radiographs in correct anatomical order. They are available in 12 different types, holding and fram-

ing each radiograph individually. There are single to 18-opening mounts for periapical radiographs; 5- and 7-opening mounts for *Bite-Wing* radiographs; a combination type for 14 periapical and 2 Type 3 *Bite-Wing* radiographs. The windows are free from cellulose backing that might cause filing hazard.

ILLUMINATOR

The Eastman X-ray Illuminator (8" x 10") provides evenly diffused illumination that closely approximates north daylight. The viewing area accommodates any Eastman Dental Film Mount, as well as other radiographs not exceeding 8" x 10". A bar at the top of the illuminator holds mount or radiograph securely in place.

Your regular dental dealer carries these efficient Eastman x-ray accessories in stock. Ask him to show them to you.

●
"X-rays in Dentistry"
explains every step in
efficient radiographic
exposure and process-
ing routine. Mail the
coupon for a free copy.

EASTMAN KODAK COMPANY, Medical Division
367 State Street, Rochester, N. Y.

Please send me a free copy of the booklet, "X-rays in Dentistry."

Name

No. & St.

City & State

The swing is to - POWDER

Today the entire dentifrice industry recognizes the pronounced swing to powder. The public, responding to leadership by the profession, has learned some basic truths about oral hygiene.

It was nearly 30 years ago that August E. Drucker, chemist, perfected the formula known as Revelation Tooth Powder. He pioneered in demonstrating its merits as a safe, pleasant and efficient cleanser. The response of the profession to these convincing demonstrations continues more evident each year.

Our records at the beginning of this year show a marked increase in the number of dentists using and recommending Drucker's Revelation Tooth Powder. Over 18,000 practicing dentists now indicate a preference for Revelation.



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TRUBYTE TEETH

STILL THE GREAT
PRACTICE-BUILDERS

CAPTURE of the select denture field by New Trubyte opened wide the vast field of moderate-priced dentures to Trubyte.

Discerning dentists who, today, are using Trubyte on moderate-priced dentures are reaping their reward in a growing and more appreciative clientele, and—

You, too, will find that Trubyte cost less than "cheap" teeth on moderate-priced dentures. The few cents' difference in cost vanishes before the time saved in selection, set-up, articulation and freedom from future trouble.

Both Patient and You
Benefit when you use

TRUBYTE

THE DENTISTS' SUPPLY COMPANY OF NEW YORK

CURTIS DENTAL PUMPS

*Automatic • Quiet • Efficient
Extremely Attractive Price*

Curtis Dental Pumps are fully automatic—no attention required except occasional oiling. Dry crank case (wick oiling)—no excess oil gets into discharge line. Special tasteless, odorless, colorless lubricant used. Occupy small space. Price is very attractive.



Curtis Dental Pumps reflect 81 years' successful engineering and manufacturing experience. Two styles: Style "V" supplies sufficient air for dentists. Style "Q", with 20 gallon tank, will supply three operating rooms and a laboratory. Write for Bulletin C 18.



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PROMETHEUS offers:

the Lowest-Priced Sterilizer in the Country

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- Lowest-priced, completely automatic sterilizer obtainable.
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- Easy, convenient foot lift.
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- Made in white and colors.
- See your dealer or send coupon for catalog.

PROMETHEUS ELECTRIC CORP.
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Gentlemen:

Please send me illustrated catalog on Prometheus Sterilizers.

Dr.

Address

Dealer

ACTUAL
SIZE

NEW!

MASSO 2-ROW

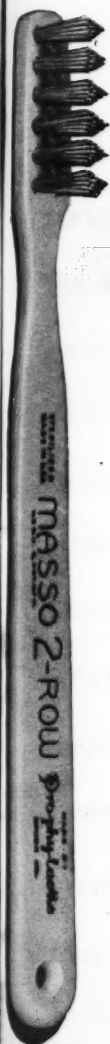
HERE is every wanted feature in *one* brush: Small, efficient brushing head one inch in length. Two rows—and *only* two rows—of widely spaced groups of bristle. And best of all, the bristle is both unbleached and Round-End.

Every dentist and periodontist who has seen it says that it is the finest tooth cleaning instrument ever presented to the profession and the public.

The retail price is 35c, which makes it such a generous value that all your patients will cheer its prescription.

Pro-phy-lac-tic Brush Co.,

Florence, Mass.



ACTUAL
SIZE

THREE STEPS ★



1 STEP No. 1 2 STEP No. 2 3 STEP No. 3

Now you can select and fit MASEL'S READY-MADE CROWNS more easily and quickly.

1. Choose a band that will fit the tooth, noting the number on the band.
2. Festoon the cervical end of the band to allow it to extend a bit under the free margin of the gum.
3. Trim occlusal end of band to required height; and remove band from tooth.

Then consult MASEL crown catalogue which will give you both height and circumference of the proper crown to use.

Ask your dealer for our (pamphlet circular) Time Savers and how to get, without charge, an assortment of Masel copper bands.



MASEL CROWN PRICES

18K Gold	22K Gold	Platinum
B .95	B 1.30	B 1.65
C 1.15	C 1.62	C 2.05
D 1.35	D 2.01	D 2.45
E 1.55	E 2.34	E 2.85
F 1.75	F 2.62	F 3.25
G 2.00	G 3.05	G 3.80

MASEL DENTAL LABORATORY

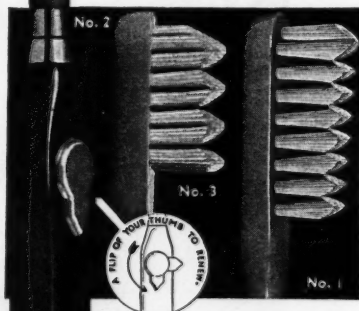
1108 Spruce St., Philadelphia, Pa.

... for clean
teeth and
healthy gums



TRU-BRISTLE RENEWABLE

(The Prescription Tooth Brush)



● A dry, firm, sterile tooth brush is not only best for your patient's teeth and gums, but is also a good common-sense way to help them fight colds! And, Tru-Bristle refills are so inexpensive that worn brushes can be discarded frequently without "pocketbook-burden." Complete Brush 75c—refills 25c each.

See special dental offer below.

Tru-Bristle Brush Co., Dept. B-336
5300 14th Ave. N.W., Seattle, Wash.

I enclose \$____. Please send me:

—Tru-Bristle Renewable Tooth Brushes @ 50c each.*

—Tru-Bristle Demonstration Sets @ \$1.00 each.* (Sets consist of 1 complete brush and 3 refills.)

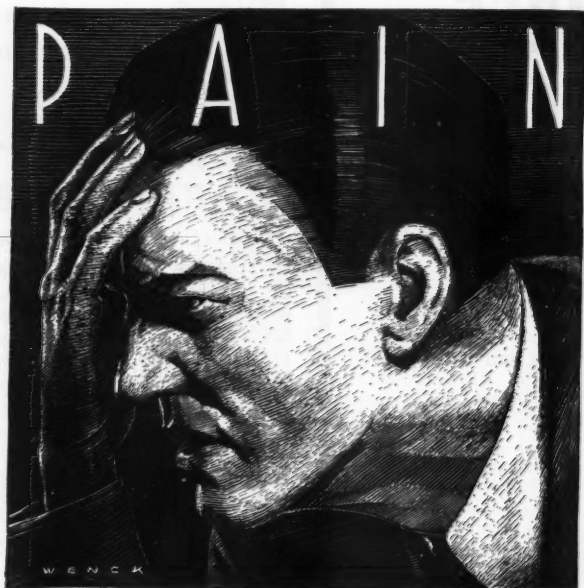
Specify Style Nos. 1 ☐, 2 ☐, 3 ☐

Dr. _____

Address _____

My prescription
druggist is _____

* These special less-than-wholesale prices made only to members of the dental profession and their assistants.



HEADACHE IS DISABLING

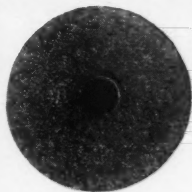
Headache may be as disabling as a grave illness. Migraine surely is. It is noteworthy how quickly the patient can obtain relief with Peralga. This non-narcotic analgesic and sedative combination of amidopyrine and barbital relieves pain quickly, yet does not cause drowsiness when the patient must remain at work. That is why Peralga is extensively prescribed in recurrent painful conditions, such as migraine and dysmenorrhea. Supplied in tablets and powder. Trial quantity sent on request.

PERALGA

SCHERING & GLATZ, INC.
113 W. 18th St., New York City

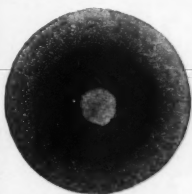


Merck SODIUM PERBORATE Flavored



Agar Cup Test Shows Heavy Growth of Bacteria on Control Plate

Agar Cup Plate, containing 10% serum inoculated with bacteria from human mouth and incubated for 24 hours at 37° C. At end of period plate contained heavy growth in the absence of any inhibiting agent.



Agar Cup Test Showing Antiseptic Value of Merck Sodium Perborate Flavored

Agar Cup Plate, containing 10% serum, inoculated with bacteria from human mouth, to which Merck Sodium Perborate Flavored has been added. After incubation period of 24 hours at 37° C, subcultures were taken from the rim of the cup. Subcultures showed no growth after additional incubation period of 24 hours.

Inhibits growth of Anaerobic Organisms associated with VINCENT'S INFECTION

A HOT, freshly prepared solution of Merck Sodium Perborate Flavored is valuable for removing the membranous exudate, and for combating the anaerobic organisms associated with Vincent's Infection. When indicated, the powder may also be moistened to form a paste and allowed to remain in contact with the affected areas for from 3 to 5 minutes.

Patients gladly supplement office treatments with home use, according to the dentist's directions, when Merck Sodium Perborate Flavored is prescribed. It is easy to use and the peppermint flavor leaves a clean, refreshing feeling in the mouth. It is a fine powder, free from abrasives, and dissolves in water or saliva, completely covering any affected area.

Your patients may obtain Merck Sodium Perborate Flavored at drug stores in 2-oz. and 4-oz. tins.

Send for circular "Sodium Perborate an Oxygen-Liberating Agent" with suggestions for use in Vincent's Infection, Pyorrhea and Gingivitis. A professional sample will also be sent. Use the coupon.

Merck Sodium Perborate Flavored is accepted by the Council on Dental Therapeutics of the American Dental Association.

● MERCK & CO. INC.

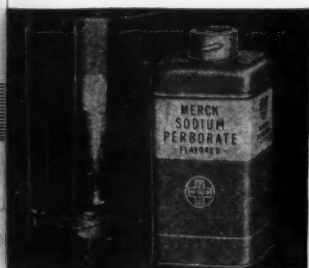
Dept. 13, Rahway, N. J.

I am attaching my professional card (or letter-head). Please send office sample of Merck Sodium Perborate Flavored and literature.

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City..... State.....



Advertising of Merck Sodium Perborate Flavored is directed to the dental and medical professions.



for
I-Piece and
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Castings
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Saddles, etc.

Sturdicast

REG. U. S. PAT. OFF.

The Popular-Priced
GOLD COLOR
Cast Gold

\$1.71
per dwt.

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CAST GOLD

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GOLD COLOR

The Patrician
of
Casting Golds

\$2.07
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Sold by Better Dealers . . . Used by
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J. F. JELENKO & CO., Inc.
Manufacturers and Refiners of Dental Golds
136 West 52nd Street, New York, U. S. A.

THERE'S A JELENKO GOLD FOR EVERY DENTAL NEED

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A Popular-Priced Gold
Specifically Designed for
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\$1.71
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The Masterpiece of
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THERE'S A JELENKO GOLD FOR EVERY DENTAL NEED

RECOMMEND**L A C T O R A L**
Milk of Magnesia Mouthwash

FOR ACID MOUTH—Containing more than 50% milk of magnesia. Lactoral neutralizes destructive mouth acids . . . **FOLLOWING PROPHYLAXIS**—Its soothing antacid properties refresh the mouth and aids in promoting healthy tissue. . . . **ACUTE STOMATITIS**—by neutralizing mouth acids it relieves soreness. Its antiseptic action is cleansing but non-irritating.

For a free sample of this palatable, neutralizing mouth wash write your name and address below and send to: Lactoral, 1801 Byron St., Chicago, Ill.

Dr.

Address.....

City..... State.....

**PREVENTS POST OPERATIVE PAIN**

**A
NEEDLE**

Stopain
TRADE MARK

**IN EACH
PACKAGE**

RELIEVES PAIN CAUSED BY DRY SOCKETS

The needle technique is
SANITARY, PAINLESS and EFFECTIVE

KING'S SPECIALTY COMPANY, FORT WAYNE, INDIANA

DENTISTS APPRECIATE

the aid of

OCCY-CRYSTINE

A fact which impressed us, particularly, in a questionnaire sent out by Oral Hygiene, was the valuable assistance dentists reported that OCCY-CRYSTINE gave them in furthering recovery. Typical of their remarks are the following:

- "Valuable in clearing up pus conditions after extractions."
- "A splendid agent to remove toxic poisons."
- "Very good in pyorrhea and high acid conditions."
- "Good after extractions."

Why not take advantage of the aid this sulphur-bearing detoxicant eliminant offers you by recommending it to patients?

A generous sample for trial mailed on request.

OCCY-CRYSTINE LABORATORY, Salisbury, Conn.



The Discovery of Bacteria

"I SAW with wonder that my material contained many tiny animals which moved about in a most amusing fashion. I had the impression that I was looking at several thousands in a given part of water mixed with a particle of the material from the teeth no larger than a grain of sand."

These were the simple words used by Anton Van Luewenhoeck in his letter to the Royal Society of London in 1683, in which the Dutch Microscopist so graphically described his famous discovery of Bacteria through his observations upon tartar scraped from the teeth.

It was not until two centuries later, however, that Professor W. D. Miller first associated mouth bacteria with tooth decay. Shortly after, Dr. N. S. Jenkins, a noted American dentist practising in Europe, began his study to develop an agent that would not only cleanse the teeth but destroy the oral bacteria. Working in cooperation with Professor Miller, Dr. Jenkins continued his experiments until 1908 when the success of his efforts was confirmed by leading medical and dental scientists in the United States and Europe.

In disclosing his formula at the meeting of The American Dental Society of Europe held in London, Dr. Jenkins said: "This preparation [Kolynos] will cleanse and polish the surfaces of the teeth without the least danger of abrasion. It will overcome the defenses of bacteria and destroy the germs. It will produce a condition of true cleanliness in the entire mouth."

The outstanding advantages of Kolynos — its germicidal and cleansing properties, have been recognized by dentists in many countries ever since the Kolynos formula was published to the dental and medical professions twenty-eight years ago.

IT'S PRESSURE PACKED

WHAT PRESSURE PACKING MEANS TO YOU

Casting Investments are made up of ingredients varying in grain shape, particle size and specific gravity. These ingredients are carefully blended to form a homogeneous mixture of definite physical properties which must be maintained for performance at maximum efficiency.

During shipping and handling between manufacturer and consumer, the heavier particles settle and the lighter grains move upward, thus offsetting all the care exercised by the manufacturer in mixing. PRESSURE-PACKING is the ONLY WAY, so far discovered, for preventing this segregation of ingredients.

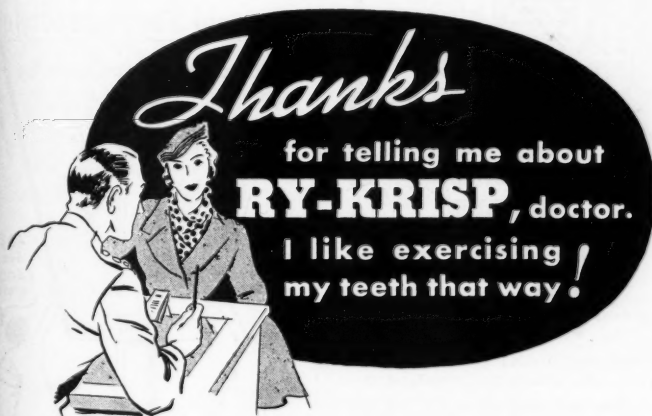


Steele's Super Investment Is the Only Investment

Packed under Pressure

(PAT.)

THE COLUMBUS DENTAL MFG. CO. Columbus, Ohio, U.S.A.



You're helping patients avoid serious future troubles when you tell them to eat Ry-Krisp, doctor. Adults and children, too, love these whole rye wafers because they taste so good. And their brittle crispness means a natural workout for teeth and gums — one that encourages thorough mastication, stimulates salivary secretion — *exercises* the whole mouth.

Ry-Krisp is simply made of flaked whole rye, salt and water, double-baked. That's why it's such a splendid food for every member of the family. It serves perfectly as toast, bread or crackers at breakfast, lunch, or dinner — actually doubles the enjoyment of other foods. To help you prove that to yourself, we'll gladly send you samples of Ry-Krisp Whole Rye Wafers and a copy of the Research Laboratory Report, without charge. Simply use the coupon.

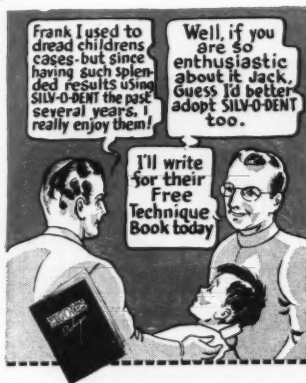


RALSTON PURINA COMPANY
Dept. OH, 186 Checkerboard Square, St. Louis, Missouri

Please send me, without obligation, samples of Ry-Krisp Whole Rye Wafers and a copy of the Research Laboratory Report.

_____ D. D. S.

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THE SILVODENT COMPANY 5-0-36
17th and Alberta Sts., Portland, Ore.

You may send me a copy of your
free booklet about SILV-O-DENT,
Oxy-eugenol silver.

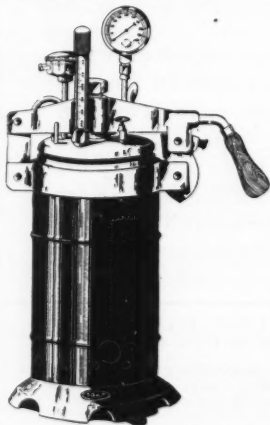
Dr.

Address.

City and State

The Right Size, Shape & Style

THE POT IN THE TORIT VULCANIZER



is made of heavy cast bronze—
will retain the original contour
of the walls, and will retain heat
better —

is made extra large for larger
flasks and to accommodate the
sturdy, heavy bronze TORIT
Flask Clamp No. F.

The 3-case pot is 9 inches deep.
The 4-case pot is 11 inches deep.

* * * * *

The TORIT Oversize Vulcanizer
will do more and better work.

Ask us for full information.

TORIT MANUFACTURING COMPANY

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MASSAGE BRUSHING



in treating Periodontal Disease
and for Home Mouth Care

THIS NEW 20-PAGE MANUAL **FREE**

Just off the presses—this new, com-
pletely illustrated, 20-page manual
of massage brushing, 9" x 12" in
size, it is packed full of the latest
authoritative information on this
new and more effective method for
combating periodontal disease. The
whys and wherefores of massage
brushing are explicitly explained.
Illustrated and detailed descriptions
of leading massage-brushing tech-
niques are presented. This manual is
free to all dentists. For your copy,
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Special Equipment for MASSAGE BRUSHING ONLY 15c PER KIT

(Includes one 50c Calsodent Brush)



This kit only 15c. Contains: one
Calsodent Brush, retail price
50c; two packets Calsodent; 12-
page handbook on massage
brushing.

Mail coupon today ...

HERE, at *less than cost* are the materials you
need for teaching your patients massage
brushing and for your chair treatments. Kit con-
tains a Calsodent Brush, regular price 50c. It is
offered to the profession only for but 15c.

Leading periodontists have found the Calsodent

Brush an ideal massage-
brushing tool. Bristles
are imported, Chung-
king boar. Only highest
quality base-end cuts
used . . . they keep re-
silience when wet. Tufts
are spaced and crowned
to penetrate into inter-
proximal areas and ar-
ranged across brush for
broadside stiffness vital
to all massage-brushing
techniques. Use coupon
for your supply of kits.

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Send me free of charge your new 20-page manual of Massage
Brushing.

Also send me . . . professional kits at your special price
to dentists of 15c each. Each kit is to contain a regular 50c
Calsodent Brush with imported, base-end cut Chungking
bristles.

☐ Check enclosed.

☐ Send C.O.D.

Name D.D.S.

Address

City State

"You're off on the wrong foot"

I've shown my advertising to several advertising men.

"You can't sell goods that way," they say, "You've got to put the pressure on."

I have never advertised Alkalol "with pressure." Yet Alkalol is sold today throughout the United States, first, because Alkalol is good, and second, because for more than 30 years it has had the loyal support of thousands of Doctors and Specialists.

Doctors have built the Alkalol business with their prescription pads. Their patients have gone to drug stores and bought Alkalol because of these prescriptions. These same patients have repeated their purchases because Alkalol helped. And they have told others.

If that's off on the wrong foot, maybe I'd better stay out of step.

Alkalol's wonderful record treating COLDS

Many head-colds will be prevented if the nasal tract is kept clean, for without a doubt the nose often acts as an incubator for bacteria.

Nasal cleanliness is no problem when Alkalol is used, for Alkalol is a pus and mucus solvent, allays irritation, reduces congestion and has a pleasant refreshing taste and odor. Different from the germicides so much exploited for oral hygiene, Alkalol can be used full strength in eye, ear, nose, mouth, wounds or burns, rash or irritation.

Let me tell you what thousands of Dentists have written about Alkalol in absolutely *unsolicited* testimonials—

"Have used Alkalol at the chair for many years with excellent results" . . .

"Am prescribing Alkalol almost exclusively as a mouth wash. Its soothing, cleansing properties are very valuable, especially after extractions" . . . "Alkalol soothes minor gum inflammations—very effective in sore mouth conditions" . . .

"Use it in a thousand and one different ways, with great satisfaction" . . .

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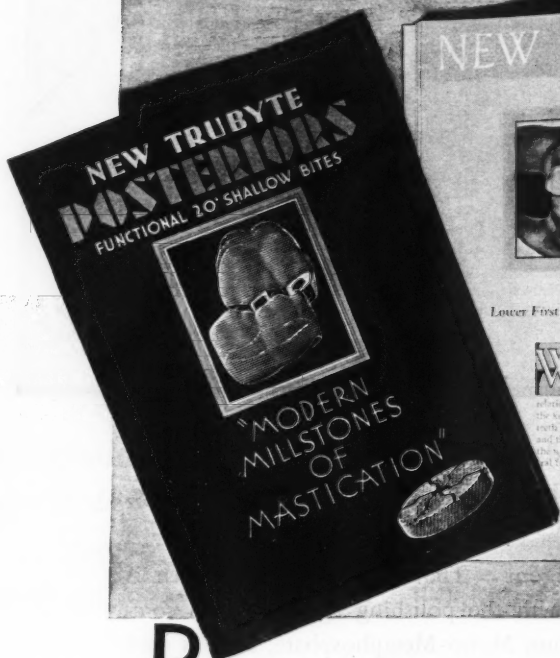


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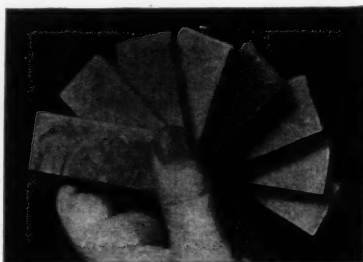
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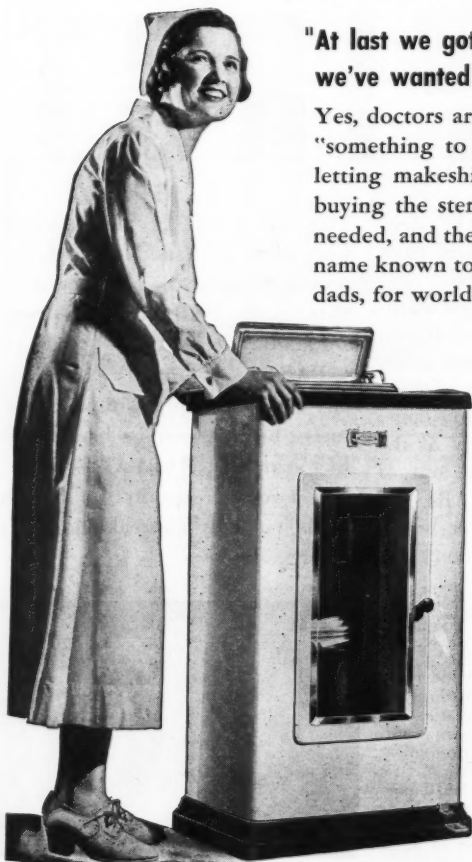
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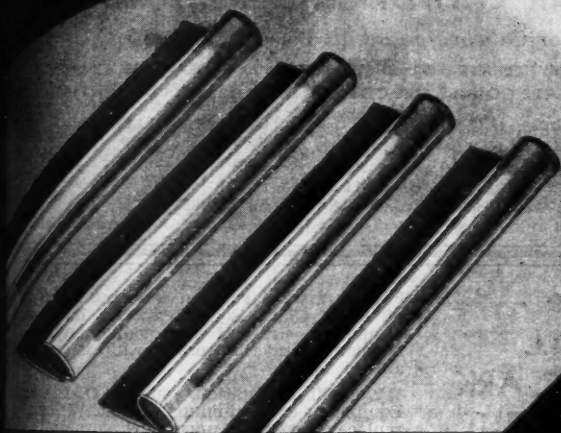
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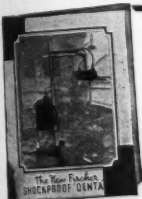
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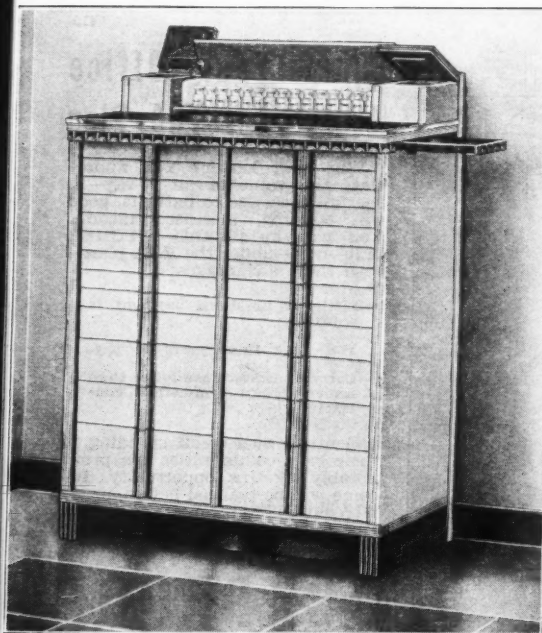
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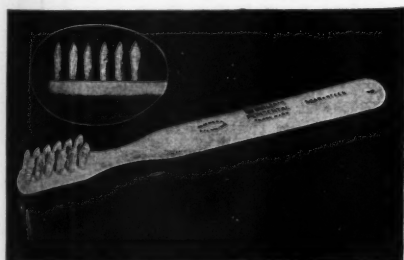
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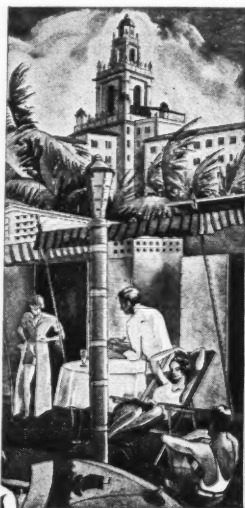
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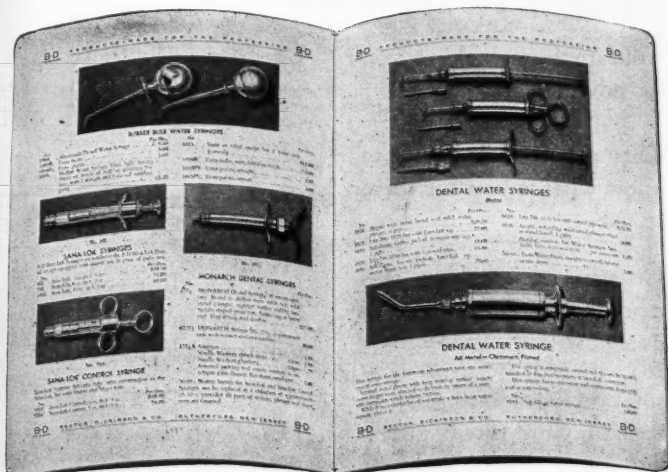
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*STANLEY W. CLARK, *Illinois Dental Journal*, Sept. 1933

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Disk 30 \pm 1 mm. in diameter

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Ultimate Compressive Strength

Minimum in 1 hr. 5000 lbs. per sq. in.
Minimum in 7 days, 12000 lbs. per sq. in.

Film Thickness Microns

Maximum 50 Microns

Disintegration

Maximum per cent by weight 1.0

How cement I* proved on these requirements (taken from Journal of American Dental Assn. Nov. 1934, p. 1913).

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Cement I set in 9 minutes

(From time mix is started)

Cement I showed ultimate compressive strength of 7538 lbs. per sq. inch in 1 hour; 13512 lbs. per sq. inch in 7 days

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For deadening painful shreds of pulp after devitalization

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*The ideal lining
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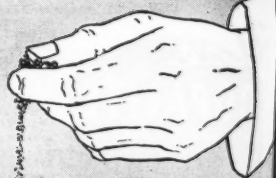
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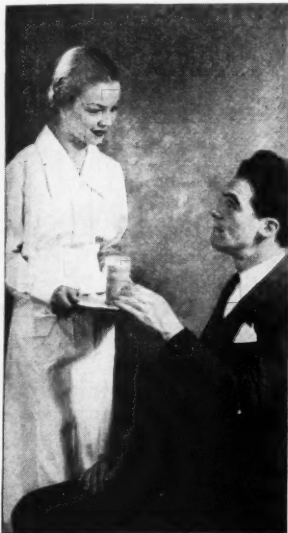
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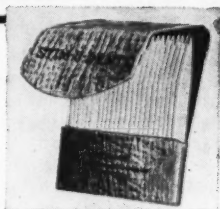
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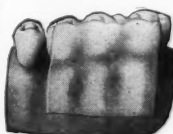
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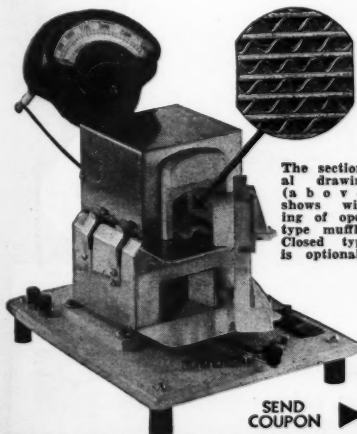
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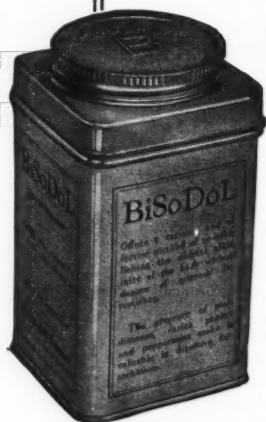
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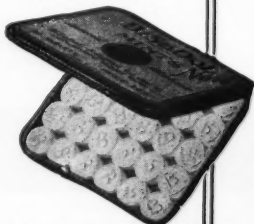
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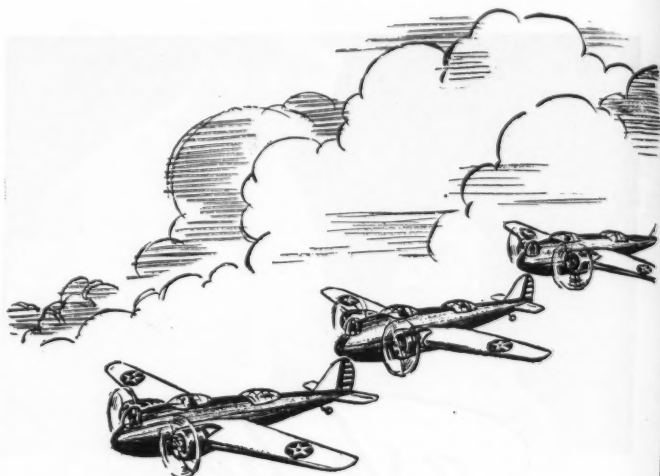
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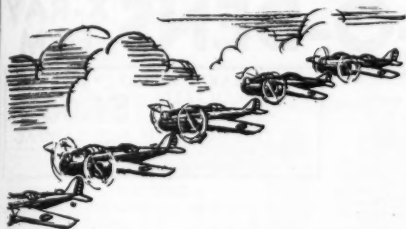


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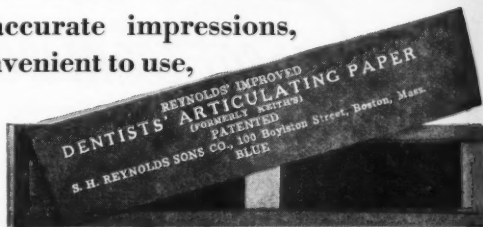
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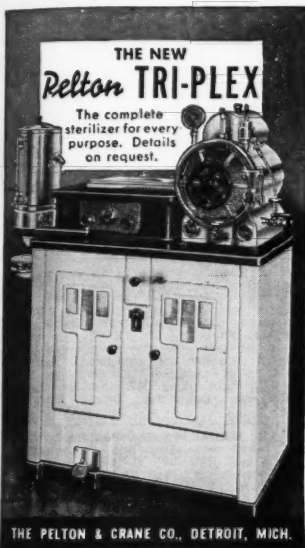
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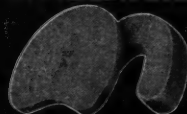


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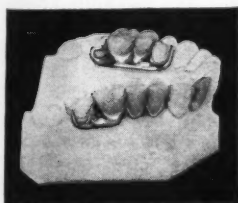
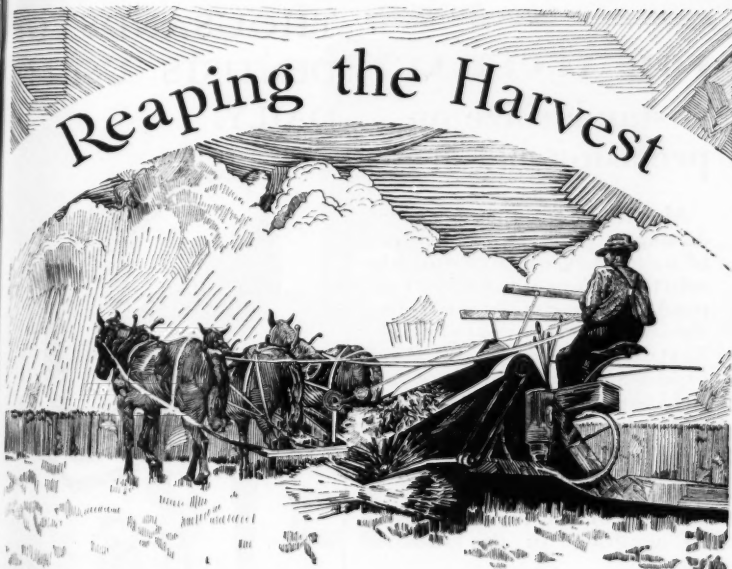
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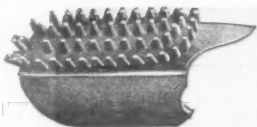
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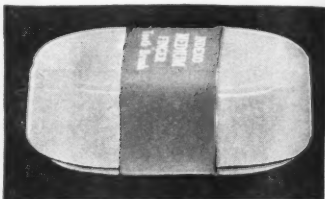


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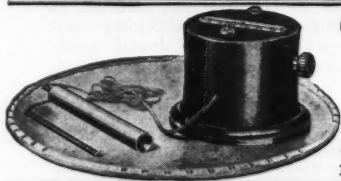


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